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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	657.474	404.311	362.711	377.605	-	377.605	406.983	434.661	476.444	601.286	Continuing	Continuing
MD24: <i>System Engineering & Integration</i>	248.553	134.820	88.315	102.979	-	102.979	114.347	150.794	180.920	316.106	Continuing	Continuing
MT23: <i>Enabling - Test</i>	-	0.000	32.386	42.850	-	42.850	65.609	41.407	37.078	35.661	Continuing	Continuing
MD28: <i>Intelligence & Security</i>	61.494	18.937	36.886	32.161	-	32.161	32.194	34.323	33.939	35.542	Continuing	Continuing
MD30: <i>BMD Information Management Systems</i>	106.012	120.313	107.744	92.488	-	92.488	97.019	94.893	105.198	91.517	Continuing	Continuing
MC30: <i>Cyber Operations</i>	-	0.000	0.000	17.443	-	17.443	16.355	16.567	18.445	17.415	Continuing	Continuing
MD31: <i>Modeling & Simulation</i>	176.406	50.181	46.608	41.223	-	41.223	32.667	45.358	47.073	51.083	Continuing	Continuing
MD32: <i>Quality, Safety, and Mission Assurance</i>	65.009	28.528	34.388	30.140	-	30.140	30.905	32.006	31.834	31.949	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	-	51.532	16.384	18.321	-	18.321	17.887	19.313	21.957	22.013	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification

The Ballistic Missile Defense (BMD) System Enabling Programs provide the Missile Defense Agency (MDA) with the critical products and processes needed to integrate element missile defense systems into a layered Ballistic Missile Defense System (BMDS) providing the capability required by the BMD Review, while improving protection performance with increased defended area, and minimizing force structure costs. BMD System-level engineering and integration enables interoperability and drives future capability development from a System perspective to maximize the effectiveness of BMD technologies. Specifically, the Enabling Programs independently evaluate the integrated BMD System methodology, threat, manufacturing maturity, technical safeguards, and mission assurance effectiveness while simultaneously assessing whether the System is proficient at maintaining its integrity and superiority with advances in technology development. As a result, MDA is able to provide evolving, integrated and layered BMDS performance and capabilities that have been thoroughly assessed and validated through testing and Modeling and Simulation.

The MDA Enabling Programs are:

UNCLASSIFIED

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<p>-(MD24) Systems Engineering and Integration (SE&I) - Systems Engineering and Integration leads the integration of the Ballistic Missile Defense (BMD) System using Element and Component capabilities to provide the Warfighter with the ability to defend the United States and its friends and allies from ballistic missile attacks. Systems Engineering defines and develops integrated BMD System capability improvements through BMD level control of system requirements, and allocates those requirements to the Element and Component levels most capable of supporting intercepts in a particular Phased Adaptive Approach (PAA) phase.</p> <p>-(MT23) Enabling-Test - The Enabling Programs Test project drives BMDS test planning, execution and post-test assessment and provides critical data for proving that missile defense works.</p> <p>-(MD28) Intelligence and Security - MDA develops data from intelligence sources into the necessary engineering products that drive the design, development, and testing used to inform and support internal MDA decisions and BMD System design reviews. Engineering processes translate missile data into threat parameter space and generate threat scenarios contained in the SE&I-developed Adversary Capability Document. These products are also necessary for system ground testing, hardware-in-the-loop testing, and the target development for live-fire testing necessary to assess system operation and verify and validate system performance. Security is also provided as an Enabling Program to apply protection across the entire BMDS.</p> <p>-(MD30) Information Management Systems - Information Management is vital to the efficient operation and safeguarding of all information, from development to fielding new BMDS capabilities.</p> <p>-(MC30) Cyber Operations - The Cyber Operations project is a new project established in FY2014. The funds in this project were realigned from MD30 (BMDS Information Management Systems) to sustain MDA's DoD Information Assurance Certification and Accreditation Program (DIACAP) and Controls Validation Testing (CVT) activities. It also funds the MDA Security Operations Center (SOC), responsible for monitoring, managing, patching, and maintaining MDA network and core IT services; issuing and tracking Technical Compliance Orders; and coordinating overarching Enterprise NetOps. The MDA Computer Emergency Response Team (CERT), funded in this project, monitors the classified and unclassified information technology MDA administrative IT networks and report vulnerabilities. The MDA CERT coordinates with U.S. Cyber Command to identify and implement network vulnerability updates and patches to comply with U.S. Cyber Command vulnerabilities identified for DoD networks. The project also funds IA governance management and administrative management support, annual Agency-wide computer-based IA training and metrics reporting, implementation of Public Key Infrastructure and Enabling and Communications Security (COMSEC) related activities.</p> <p>-(MD31) Modeling and Simulation - As missile defense technologies continually advance and the threat changes, Modeling and Simulation develops system-level models, simulations, and environments, then evaluates performance of the Elements, Components, and overall BMD System.</p> <p>-(MD32) Quality, Safety, and Mission Assurance - Quality, Safety, and Mission Assurance has the distinct management role of improving quality, safety, and mission assurance throughout the product life cycle of design, manufacturing, test and system operation, in order to achieve a safe and reliable BMD System.</p> <p>-(MD40) Program-Wide Support (PWS) consists of essential non-headquarters management costs in support of the MDA functions and activities across the entire Ballistic Missile Defense System (BMDS).</p>		

UNCLASSIFIED

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B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	415.048	362.711	339.197	-	339.197
Current President's Budget	404.311	362.711	377.605	-	377.605
Total Adjustments	-10.737	0.000	38.408	-	38.408
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	4.539	0.000			
• SBIR/STTR Transfer	-15.276	0.000			
• Other Adjustment	0.000	0.000	38.408	-	38.408

Change Summary Explanation

The FY 2014 adjustments reflect realignment of Department of Defense priorities.

UNCLASSIFIED

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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013[#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
MD24: <i>System Engineering & Integration</i>	248.553	134.820	88.315	102.979	-	102.979	114.347	150.794	180.920	316.106	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification

Systems Engineering and Integration (SE&I) continues to develop and improve the integrated Ballistic Missile Defense System (BMDS) architectures, engineer major improvements to regional Ballistic Missile Defense (BMD) capabilities, and provide system improvements that enable earlier BMD engagements and development of the BMDS level Models and Simulations (M&S) necessary to support BMDS testing and delivery to the Warfighter. Systems Engineering and Integration is the single team that applies its technical expertise and tools across many disciplines and specialties to lead a collaborative effort to define, design, test and integrate the Ballistic Missile Defense System. SE&I develops technical roadmaps, knowledge points, and capability trades at the BMDS level to balance integration and improvement efforts. The SE&I workforce, including Industry and Contractor Support Services (CSS), also provides analysis, decision-making and planning activities for real-world operations to the National Command Authority, Joint Staff, Military Services, North Atlantic Treaty Organization (NATO), Combatant Commanders, Operational Test Agencies, Director of Operational Test and Evaluation, Allies, and others.

Fundamental to the System Engineering and Integration (SE&I) approach is development, coordination, and dissemination of fully vetted products at each stage of the SE&I process. These products document and communicate key information such as: technical goals and objectives, design trades and resulting decisions to update system design and interface requirements; integration plans and schedules; test objectives that include the collection of data needed to anchor the system representative models and simulations and enable independent verification and validation; assessment through ground and flight test results; and fielding plans.

The system engineering process defines required system-wide behavior, validates Element system designs, and assesses and verifies system capabilities in 5 stages: 1) Future Concepts and Planning; 2) Requirements and Design; 3) Integrated Master Test Plan (IMTP) Engineering; 4) Integration; and 5) Verification and Assessment.

Additional engineering efforts cross multiple stages of the system engineering process: Countermeasures/Counter-countermeasures (CM/CCM), Threat Systems Engineering, Engineering Analysis and Quick Response Team, Anti-Tamper, Manufacturing, Reliability and Producibility, International Engineering, and Engineering Manufacturing Readiness Levels Development programs.

UNCLASSIFIED

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--	-------------------------

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System Engineering and Integration (SE&I) Major Program Goals:

- Develop, design, test and integrate a layered BMDS that provides the required Ballistic Missile Defense performance
- Provide system-level support to the Elements, and lead collaborative cross-Element, cross-Component engineering
- Develop the European Phased Adaptive Approach (EPAA) architecture and requirements to respond to the proliferation of short and medium range ballistic missiles, provide a more effective missile defense capability for U.S. deployed forces, allies, and partners in Europe, and enhanced homeland defense
- Provide technical direction to Element and Component developers and provide System-level forums to track, assess, and improve hardware and software reliability
- Define the BMD threat space and identify BMDS capabilities and limitations
- Verify and Assess BMDS performance and capabilities through testing
- Develop Ballistic Missile Defense System Performance Assessment parameters
- Identify the Critical Engagement Conditions and data required to develop the test campaigns that will demonstrate regional defense performance, and verify and assess the capability of each Phased Adaptive Approach
- Define the test objectives necessary to anchor BMDS-level models and simulations, enable independent verification and validation, and identify System issues occurring in ground and flight tests
- Analyze architecture alternatives and new technologies to establish technical roadmaps for future capabilities and ensure the BMDS is complementary to and interoperable with NATO and other theater systems
- Provide detailed analysis to support MDA leadership and US policy decisions
- Develop anti-tamper approaches to enable international fielding of the BMDS

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
<p>Title: Future Concepts and Planning</p> <p align="right">Articles:</p> <p>Description: Future Concepts performs functional trades and analysis, and develops initial requirements and design integration and documentation for future Ballistic Missile Defense System (BMDS) capabilities.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Completed the ongoing Phased Adaptive Approach (PAA) Phase 3/4 architectural trade studies and updated the concept capability documentation based on its results and the results of technology development experiments. - Refined the Capability Planning Specification for Precision Tracking Space System (PTSS) and the future Command and Control Battle Management and Communications (C2BMC) components, leading to BMD System Requirements Reviews based on the architectural trade studies. - Supported technology development reviews for Precision Tracking Space System (PTSS), and Standard Missile-3 (SM-3) Block IIB in preparation for BMD System Requirements Reviews based on the architectural trade studies. - Developed the Capability Planning Specification for the Aegis 5.X weapon system and the Standard Missile 3 (SM-3) Block IIB. - Produced an updated BMDS Lethality Program Plan to encompass lethality assessment, collateral effects and consequences - Assessed and added emerging threats to Missile Defense Agency lethality prediction models. 	<p>8.963</p> <p>0</p>	<p>10.181</p> <p>0</p>	<p>9.642</p> <p>0</p>

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012		
<ul style="list-style-type: none"> - Supported Defense Threat Reduction Agency (DTRA)/Missile Defense Agency efforts to provide consequence model predictive capabilities. - Maintained the BMDS System Engineering Plan ensuring synchronization of Element System Engineering Plans with the System document. - Countermeasures (CM)/Counter-countermeasures (CCM) Red Team: <ul style="list-style-type: none"> -- Completed initial independent adversary (Red Team) perspective on Phased Adaptive Approach (PAA) capabilities -- Completed independent adversary (Red Team) perspective on adversary attack strategy against PAA -- Completed independent adversary (Red Team) selection of integrated countermeasure suites to be evaluated in FY 2013 <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - Complete concept capability documentation updates based on the results of the Phased Adaptive Approach (PAA) Phase 3/4 architectural trade studies and technology development experiments. - Refine the Capability Planning specifications for Precision Tracking Space System (PTSS) and the future Command and Control Battle Management and Communications (C2BMC) components. - Support technology development reviews for Precision Tracking Space System (PTSS), and Standard Missile-3 (SM-3) Block IIB in support of follow on development efforts. - Develop the Capability Planning Specification for the Aegis 5.x weapon system and the Standard Missile 3 (SM-3) Block IIB. - Produce an updated BMDS Lethality Program Plan to encompass lethality assessment, collateral effects and consequences. - Assess and add emerging threats to Missile Defense Agency lethality prediction models. - Support Defense Threat Reduction Agency (DTRA)/Missile Defense Agency efforts to provide consequence model predictive capabilities. - Maintain the System Engineering Plan ensuring synchronization of Element System Engineering Plans with the System document. - Countermeasures (CM)/Counter-countermeasures (CCM) red Team: <ul style="list-style-type: none"> -- Update independent adversary (Red Team) perspective on Phased Adaptive Approach (PAA) -- Complete independent adversary (Red Team) evaluation of three integrated countermeasure suites against PAA -- Complete independent adversary (Red Team) detailed evaluation of attack strategy against two selected PAA components <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Support Technical Evaluation Activities for Phased Adaptive Approach (PAA) Phase 4 Programs (Command and Control Battle Management and Communications (C2BMC), Aegis 5.1.X/SM-3 Blk IIB). - Conduct BMDS Performance Analysis and Trade Studies to support PAA Phase 4 program technical reviews (C2BMC, Aegis 5.1.X/ SM-3 Blk IIB). - Conduct BMDS Program of Record gap assessment and concept alternative assessment in support of budget development process. 						

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Initiate Development of Capability Planning Specifications to document functional and performance requirements for Future BMDS Programs. - Analyze architecture alternatives and new technologies, including new Directed Energy (laser) concepts. - Identify and evaluate architecture alternatives that are complementary to and interoperable with North Atlantic Treaty Organization (NATO) systems and theaters around the world and that improve the systems' performance. - Develop High Fidelity Lethality Data products to support Modeling and Simulation (M&S) Lethality Model Validation and accreditation. - Assess and add emerging threats to the Missile Defense Agency (MDA)'s lethality prediction models. - Produce and execute the BMDS Lethality Program Plan to encompass updates to lethality assessments, collateral effects and consequences. - Assess emerging threats and develop countermeasure mitigation strategies and roadmaps 				
<p>Title: Requirements and Design</p> <p align="right">Articles:</p> <p>Description: The Requirements and Design effort develops the Ballistic Missile Defense (BMD) System-level requirements and specifications and drives the integration of the Ballistic Missile Defense System (BMDS); adjudicates Element level specifications; and underpins the BMDS, resulting in optimized capabilities for the Warfighter.</p> <p>FY 2012 Accomplishments: Conducted Engineering Reviews for MDA priorities, including Phased Adaptive Approach capabilities:</p> <ul style="list-style-type: none"> - Conducted BMD System/Subsystem Design Reviews following Element Requirement Reviews to assess the maturity of the technical baseline at both the System and Subsystem levels, as well as the plans for integration, test and verification prior to execution. - Ensured requirements for Phased Adaptive Approach capabilities were adequately addressed. - Continued technical evaluation of emerging adversary characteristics to be included within future Adversary Data Packages. - Developed updates to the BMD System Description Document, BMD System Specification, and BMD System Interface Control Documents to document integrated system build content approved for design, development and integration, including new Phased Adaptive Approach capabilities (e.g., Phase 3 and 4 documentation in the BMD System Description Document). - Conducted engineering analyses and performed trade studies for system design and development products, including the BMD System Specification and BMDS Interface Control Documents. - Provided updated requirements traceability and certification guidance and conducted detailed System/Element requirements reconciliation which resolved technical disconnects and ensured common System/Element requirements interpretation. <p>FY 2013 Plans: Conduct Engineering Reviews for MDA Engineering, which include new Phased Adaptive Approach capabilities:</p>		30.653 0	26.485 0	24.486 0

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Conduct BMD System/Subsystem Design Reviews following Element Requirement Reviews to assess the maturity of the technical baseline at both the System and Subsystem levels, as well as the plans for integration, test and verification prior to execution. - Ensure requirements for the new Phased Adaptive Approach capabilities are adequately addressed. - Continue technical evaluation of emerging adversary characteristics to be included within future Adversary Data Packages. - Develop updates to the BMD System Description Document, BMD System Specification, and BMD System Interface Control Documents to document integrated system build content approved for design, development and integration, including new Phased Adaptive Approach capabilities (e.g., Phase III and IV documentation in the BMD System Description Document). - Conduct engineering analyses and perform trade studies for system design and development products, including the BMD System Specification and BMDS Interface Control Documents. - Provide updated requirements traceability and certification guidance and conduct detailed System/Element requirements reconciliation to resolve technical disconnects and ensure common System/Element requirements interpretation. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Conduct BMDS Engineering Reviews to address new capabilities: --Conduct BMD System/Subsystem Design Reviews following FY 2014 Element Requirement Reviews to assess maturity of the evolving technical baseline (System and Subsystem levels) and plans for integration, test and verification. -- Determine BMD system implications resulting from the Aegis BMD 5.1 Preliminary Design Review (PDR) and the Standard Missile-3 Block IIA (SM-3 Blk IIA) Critical Design Review (CDR). --Perform technical evaluations of emerging adversary characteristics to be included within future Adversary Data Packages. - Update BMDS Engineering Documentation to capture refinements to integrated system build content approved for design, development and integration, in accordance with BMDS Phased Implementation Plan: --BMD System Description Document (BMD SDD) and BMD System Specification (BMD SS) (i.e. incorporation of Robust IRBM Defense and Early Intercept/ ICBM Defense capabilities). --BMDS Interface Control Documents (ICDs). - Conduct engineering analyses and perform trade studies for system design and development products. - Continue to provide updated requirements traceability and certification guidance and conduct detailed System/Element requirements reconciliation to resolve technical disconnects and ensure common requirements interpretation. 				
Title: Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment		22.265	0.000	0.000
Articles:		0	0	0

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012		
<p>Description: The IMTP effort develops Ballistic Missile Defense System (BMDS) test objectives and scenarios, and participates in test planning, execution, and post-test assessment.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Updated the Master Integration Plan (MIP) to reflect changes in planned delivery of BMDS content. - Provided engineering inputs for Integrated Master Test Plan (IMTP) updates using the Planning Allocation Matrix (PAM) tool to identify integration, test, assessment, and verification activities. - Collected BMDS Suitability Data through the Joint Reliability and Maintainability Engineering Team (JRMET) Data Scoring Boards - Provided pre- and post-test support for the Failure Reporting, Analysis, and Corrective Action System, which investigated BMDS test failures and identified solutions to enhance reliability. - Defined and executed required performance assessments to support incremental capability deliveries. - Provided monthly updates for BMDS verification status. - Conducted Site K, European Command (EUCOM) Command, Control, Battle Management, and Communications, and Site 512 Technical Capability Declaration reviews in lieu of the BMD System Critical Design Review. - Performed System-level analysis and interoperability analysis on BMDS test events listed in the IMTP. - Developed Analysis Execution Plans (AEP) and final Test Analysis Reports (TAR) for BMDS test events listed in the IMTP. - Led Joint Analysis Teams (JAT) for BMDS test events listed in the IMTP. - Developed, delivered, and briefed Quick Look Brief (QLB), Executive QLB (EQLB), Mission Data Review (MDR), and Executive MDR (EMDR) for Flight Test Terminal High Altitude Area Defense (FTT) 12, Flight Test Standard Missile 3 (FTM) 16 Event 2a, and FTM-18; supported Ground Test Focused (GTX) 04e, Ground Test Integrated (GTI) 04d part 2, Ground Test Distributed (GTD) 04d Part 2 and Part 3, GTI-04 Israel and Fast Eagle events. - Incorporated software changes to Modular Analysis and Reporting Suite (MARS) to enhance analyst efficiency and capability. - Continued to populate the MARS Analysis Database with current test data to support analysis and capability assessments. - Led performance analysis planning and data collection to support upcoming capability deliveries. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - FY 2013 plans are in budget project MT23 0603890C under accomplishment `IMTP Engineering, Integration, Verification and Assessment - SE&I` <p>FY 2014 Plans: N/A</p>						
Title: Systems Engineering, Engineering Analysis and Quick Response Team				Articles:		
				43.328 0		
				6.923 0		
				6.401 0		

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012
<p>Description: The Systems Engineering, Engineering Analysis, and Quick Response Team task provides rapid response, high quality systems engineering analysis products to address external and internal Agency inquiries; produces complex weapon system performance data; develops responses to warfighter requests for information and analysis (RFI/RFA); and maintains the Effectiveness Metrics Standard to ensure consistent and accurate analyses.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Conducted overall Systems Engineering and Integration program operations and management. - Conducted system level performance analysis to support Ballistic Missile Defense System (BMDS) Architecture and Systems Engineering, including completion of the Phased Adaptive Approach (PAA) Phase 3/4 architectural trade studies and System and Element Requirements Reviews. - Developed expected performance for each Phased Adaptive Approach phase as input to System architecture and design effort. - Conducted technical analyses and provided engineering assessments of the Standard Missile 3 Block IIB. - Updated the Element/Component Characterizations for Analysis (E/CCA) with latest performance data to ensure correct and consistent analytical results. - Maintained the Effective Metric Standard (EMS) necessary for systematic presentation of alternatives to MDA senior leaders and the Combatant Commanders. - Provided engineering technical assessments in BMDS and Element programs in the critical areas designated by the Director for Engineering. - Provided analysis and assessment support to the Combatant Commands to respond to over 50 Warfighter requests for analyses and requests for information. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - Conduct overall Systems Engineering and Integration program operations and management. - Conduct system level performance analysis to support BMDS Architecture and Systems Engineering. - Develop expected performance for each PAA phase as input to System architecture and design effort. - Conduct technical analyses and provide engineering assessments of the Standard Missile 3 Block IIB. - Update the Element/Component Characterizations for Analysis (E/CCA) with latest performance data to improve capability. - Maintain the Effective Metric Standard (EMS) necessary for systematic presentation of alternatives to MDA senior leaders and the Combatant Commanders. - Provide engineering technical assessments in BMDS and Element programs to examine critical areas as designated by the Director for Engineering. 				FY 2013
				FY 2014

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>- Provide analysis and assessment support to the Combatant Commands to respond to Warfighter requests for analyses and requests for information.</p> <p>FY 2014 Plans:</p> <p>- Conduct system level performance analysis to support ongoing BMDS Architecture and Systems Engineering efforts: -- Develop expected performance for PAA phases 3 and 4: Robust IRBM Defense and Early Intercept/ ICBM Defense. -- Conduct technical analyses and provide performance predictions for future BMDS components, such as Standard Missile 3 Block IIB. --Provide technical assessments in critical areas, such as technical performance measures.</p> <p>- Conduct analyses to support Aegis BMD 5.1 and Standard Missile-3 Block IIA (SM-3 Blk IIA) engineering reviews. - Respond to Warfighter, COCOM and Other requests for analyses and requests for information: provide analytical support for real-world events. - Provide updated Element/Component Characteristics for Analysis (E/CCA) with performance data changes to ensure consistent capability predictions and analyses. - Maintain the Effective Metric Standard (EMS) necessary for systematic presentation of alternatives to MDA senior leaders and the Combatant Commanders.</p>				
<p>Title: Threat Engineering</p> <p align="right">Articles:</p> <p>Description: The Threat Systems Engineering effort provides consistent definitions of adversary capabilities required for Ballistic Missile Defense System (BMDS) development and design, and maintains and updates the Agency-wide threat documentation to ensure the threat parameters used for BMD System performance predictions, analyses, design, verification, and assessment are correct and consistent.</p> <p>FY 2012 Accomplishments:</p> <p>- Maintained and updated the agency-wide common and consistent BMDS threat to provide data for future Ballistic Missile Defense System design, verification, and assessment. - Updated adversary missile capabilities and characterizations consistent with projected threat environment for the BMDS Phased Adaptive Approach (PAA).</p> <p>FY 2013 Plans:</p> <p>- Maintain and update the agency-wide common and consistent BMDS threat to provide data for future BMDS design, verification, and assessment.</p>		3.205 0	8.788 0	8.125 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD24: <i>System Engineering & Integration</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				
- Update adversary missile capabilities and characterizations consistent with projected threat environment for the BMDS PAA.				
FY 2014 Plans: Develop and maintain the BMDS threat set to support BMDS design, verification, and assessment efforts. -- Update, verify, and validate threat models to include new threat representations, based on current intelligence reports. -- Produce new or update existing models to support development of ground test and digital simulation related scenario data, in accordance with the Integrated Master Test Plan (IMTP). -- Update the parametrically defined threat space. -- Complete development of a threat library, including systems with countermeasures. -- Validate threat representation of targets and support development of target requirements. -- Publish FY 2014 Adversary Data Package.				
Title: Anti-Tamper and Engineering Manufacturing Readiness Levels Development		FY 2012	FY 2013	FY 2014
Description: Anti-Tamper & Engineering Readiness Level Development develops anti-tamper approaches to enable international fielding of the Ballistic Missile Defense System (BMDS) by providing protection against reverse engineering of critical technologies, supporting coalition warfare, and extending the effective operational life of the BMDS. Engineering and Manufacturing Readiness Levels provide a means to evaluate the maturity of the BMDS elements, systems, and components by assessing the program or product against quantifiable criteria.		6.521	5.011	4.633
FY 2012 Accomplishments: Anti-Tamper: - Developed Anti-Tamper technologies to enable response and sensing capabilities for the BMDS. Engineering and Manufacturing Readiness Levels (EMRLs): - Applied Engineering and Manufacturing Readiness Levels to evaluate the engineering and manufacturing maturity of the BMDS elements, systems, and components, by assessing the program or product against quantifiable criteria. - Used Engineering and Manufacturing Readiness Levels to assess the maturity of MDA development programs, and to report readiness for transition to production, in a standard format across all MDA Elements.		Articles: 0	0	0
FY 2013 Plans: Anti-Tamper: - Develop Anti-Tamper technologies to enable response and sensing capabilities for the BMDS. Engineering and Manufacturing Readiness Levels (EMRLs):				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Apply Engineering and Manufacturing Readiness Levels as a means of evaluating the engineering and manufacturing maturity of the BMDS elements, systems, and components, by assessing the program or product against quantifiable criteria. - Use Engineering and Manufacturing Readiness Levels to assess the maturity of MDA development programs, and to report readiness for transition to production, in a standard format across all MDA Elements. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Assist BMDS Programs in developing Anti-Tamper strategy, to facilitate horizontal protection of BMDS enabling technologies and obtain concurrence of Department of Defense Anti-Tamper Executive Agent on Anti-Tamper Plans for BMDS Programs. - Continue to develop Anti-Tamper detection and response technologies to mitigate risk. - Apply Engineering and Manufacturing Readiness Levels (EMRLs) to evaluate engineering and manufacturing maturity of BMDS elements, systems, and components. - Assess and report readiness of MDA development efforts for transition to production. 				
<p>Title: Independent Technical Assessment</p> <p align="right">Articles:</p> <p>Description: Provide subject matter expertise to support high priority Ballistic Missile Defense System (BMDS) studies and reviews.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Conducted non-advocate assessments of the BMDS capabilities and limitations prior to capability delivery decisions to determine fielding readiness. These assessments included Defense of the Homeland, Phased Adaptive Approach (PAA), Defense of Israel and Theater/Regional BMD configurations (e.g., SITE B). - Performed independent analyses and assessments for the MDA Director and MDA Director for Engineering including investment prioritization, system architecture studies, design reviews, and failure investigations. - Monitored the development and recommended improvements to the digital simulation enterprise based on an evaluation of the validity of component-, Element- and System-level models (and frameworks) and participation in Performance Assessment and other digital Modeling and Simulation events. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - Conduct non-advocate assessments of the BMDS capabilities and limitations prior to capability delivery decisions to determine fielding readiness. These assessments include Defense of the Homeland, Phased Adaptive Approach (PAA), Defense of Israel and Theater/Regional BMD configurations (e.g., SITE B). - Perform independent analyses and assessments for the MDA Director and MDA Director for Engineering including investment prioritization, system architecture studies, design reviews, and failure investigations. 		9.324 0	11.313 0	10.459 0

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Monitor the development and recommend improvements to the digital simulation enterprise based on an evaluation of the validity of component-, Element- and System-level models (and frameworks) and participation in Performance Assessment and other digital Modeling and Simulation events. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Perform independent analyses and assessments for MDA Leadership, including investment prioritization, system architecture studies, design reviews, and failure investigations. - Conduct non-advocate assessments of the BMDS capabilities and limitations prior to capability delivery decisions to determine fielding readiness, including assessments of Defense of the Homeland, Phased Adaptive Approach (PAA), Defense of Israel and Theater/Regional BMD configurations. - Monitor development and recommend improvements to the digital simulation enterprise based on an evaluation of the validity of Component, Element and System-level models (and frameworks) and participation in Performance Assessment and other digital Modeling and Simulation events. 				
Title: Knowledge Centers		9.443	13.686	12.653
	Articles:	0	0	0
<p>Description: Knowledge Centers serve as independent technical advisors to Ballistic Missile Defense System (BMDS) program offices in the C2BMC, Interceptor, Space, and Sensor areas to support development of technical approaches and improve reliability.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Identified and mitigated BMDS element (Command, Control, Battle Management and Communications, Interceptor, Space, and Sensor) technical risks, and served as independent technical advisors to BMDS program offices. - Provided independent review of BMDS Knowledge Point closure, and participated in Failure Review Boards. - Provided program managers a mechanism to reach back to Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Research Centers (UARCs) to support development of technical approaches to improve Command, Control, Battle Management and Communications (C2BMC), Interceptor, Space, and Sensor reliability. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - Identify and mitigate BMDS element (C2BMC, Interceptor, Space, and Sensor) technical risks, and serve as independent technical advisors to BMDS program offices. - Provide independent review of BMDS Knowledge Point closure, and participate in Failure Review Boards as necessary. 				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>- Provide program managers a mechanism to reach back to Federally Funded Research and Development Centers and University Affiliated Research Centers to support development of technical approaches to improve C2BMC, Interceptor, Space, and Sensor reliability.</p> <p>FY 2014 Plans:</p> <p>-Provide reach-back capability (Federally Funded Research and Development Centers and University Affiliated Research Centers) for Element program managers in the four key technical areas of C2BMC, Interceptors, Sensors, and Space:</p> <ul style="list-style-type: none"> -- Support BMDS and Element Independent Review Teams -- Identify and provide recommendations to mitigate technical risks: incorporate out-of-the-box concepts for Risk Mitigation and Reduction -- Provide independent technical analysis to support Knowledge Point definitions, system and element performance assessments, and risk management -- Provide subject matter expertise for Failure Review Boards and Failure Investigation teams -- Conduct assessments of emerging technologies, including focal plane array development, radiation-hardened components, and improvements to modeling and simulation 				
<p>Title: Risk Management</p> <p align="right">Articles:</p>		1.118 0	5.928 0	5.480 0
<p>Description: The Risk Management task identifies Ballistic Missile Defense System (BMDS) Element and Component technical risks, and tracks status and risk mitigation progress.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Reviewed, approved and configuration managed program risks across the BMDS. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - Review, approve and configuration manage program risks across the BMDS. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Establish, manage, and configuration control the MDA Risk Management process. - Review and approve program element risks, on quarterly basis. - Convene and chair Risk Management Working Group. 				
<p>Title: Manufacturing and Producibility</p> <p align="right">Articles:</p>		0.000 0	0.000 0	4.500 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>Description: This activity supports a system-level reliability, producibility and manufacturing team to reduce risk of test failures and performance shortcomings and drive reliability into system and component designs. Manufacturing and Producibility will also address materials, key component, and subsystem design and development to reduce cycle time, part count, and risk.</p> <p>FY 2012 Accomplishments: N/A</p> <p>FY 2013 Plans: N/A</p> <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Update MDA reliability standards and procure reliability tools. - Assess operationally deployed equipment failures for trends and corrective action - Establish MDA industrial capability base assessments tied to manufacturing technology. - Assess and identify plans to reduce critical manufacturing materials and technologies and materials in missile production - Integrate reliability and production improvements with SBIR research and development. 				
<p>Title: Discrimination</p> <p align="right">Articles:</p> <p>Description: N/A</p> <p>FY 2012 Accomplishments: N/A</p> <p>FY 2013 Plans: N/A</p> <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Develop and test software upgrades to C2BMC to aggregate information from multiple sensors to improve identification of lethal targets to fire control. - Develop and test TPY-2 sensor and interface upgrades required to pass sensor generated features to C2BMC needed for improving identification of lethal targets. 		0.000 0	0.000 0	16.600 0
Accomplishments/Planned Programs Subtotals		134.820	88.315	102.979

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,143.313	903.172	1,033.903		1,033.903	1,045.500	1,002.568	815.198	781.824	Continuing	Continuing
• 0603888C: <i>Ballistic Missile Defense Test & Targets</i>	88.162	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	88.162
• 0603904C: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	58.970	63.043	52.131		52.131	59.893	52.005	61.751	53.511	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	484.838	454.400	375.866		375.866	436.063	378.063	400.157	451.776	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	497.550	435.747	495.257		495.257	516.092	406.611	481.527	463.660	Continuing	Continuing

Remarks

D. Acquisition Strategy

In order to optimize the performance of the BMDS, MDA leverages the nation's engineering Centers of Excellence at government agencies and Military Services, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and industry. The executing agents utilize various contracting strategies in a flexible manner to maximize their contribution to the BMDS. Products and Services will be acquired by competitive means to the extent that is possible and practical.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Future Concepts and Planning - Future Concepts - CSS	C/CPAF	CSC:AL	10.292	1.634		4.032	Oct 2012	3.728	Oct 2013	-		3.728	Continuing	Continuing	Continuing
Future Concepts and Planning - Future Concepts - FFRDC / UARC 1	MIPR	SNL:CA	0.942	0.248		0.314	Oct 2012	0.290	Oct 2013	-		0.290	Continuing	Continuing	Continuing
Future Concepts and Planning - Future Concepts - FFRDC / UARC 2	MIPR	LLNL:CA	1.104	0.279		0.354	Oct 2012	0.328	Oct 2013	-		0.328	Continuing	Continuing	Continuing
Future Concepts and Planning - Future Concepts - Industry	C/CPAF	Boeing:AL	11.403	5.256		5.481	Oct 2012	5.296	Oct 2013	-		5.296	Continuing	Continuing	Continuing
Future Concepts and Planning - Future Concepts - Planning CSS	C/CPFF	CSC:VA	0.000	1.546		0.000		0.000		-		0.000	0.000	1.546	0.000
Future Concepts and Planning - Future Concepts - Various 1	C/CPFF	Various:Various	0.794	0.000		0.000		0.000		-		0.000	0.000	0.794	0.000
Requirements and Design - Reqts & Design - CSS 1	C/CPFF	CSC:AL	9.979	6.174		6.510	Oct 2012	6.019	Oct 2013	-		6.019	Continuing	Continuing	Continuing
Requirements and Design - Reqts & Design - CSS 2	C/CPFF	Cobham:CA	0.000	5.532		0.000		0.000		-		0.000	0.000	5.532	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Requirements and Design - Reqts & Design - FFRDC/UARC 1	MIPR	MIT/LL:MA	1.251	0.542		0.573	Oct 2012	0.530	Oct 2013	-		0.530	Continuing	Continuing	Continuing
Requirements and Design - Reqts & Design - FFRDC/UARC 2	MIPR	LLNL:CA	0.190	0.099		0.103	Oct 2012	0.095	Oct 2013	-		0.095	Continuing	Continuing	Continuing
Requirements and Design - Reqts & Design - FFRDC/UARC 3	MIPR	JHU-APL:VA	2.274	0.000		0.000		0.000		-		0.000	0.000	2.274	0.000
Requirements and Design - Reqts & Design - Industry	C/CPAF	Boeing:AL	31.095	17.274		18.210	Oct 2012	16.835	Oct 2013	-		16.835	Continuing	Continuing	Continuing
Requirements and Design - Reqts & Design - Other DoD	MIPR	NSWC:IN	2.784	1.032		1.089	Oct 2012	1.007	Oct 2013	-		1.007	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - IMTP - CSS 1	C/CPFF	CSC:Various	13.601	2.000		0.000		0.000		-		0.000	0.000	15.601	0.000
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - IMTP - CSS 2	C/CPFF	Cobham:CA	0.000	2.000		0.000		0.000		-		0.000	0.000	2.000	0.000
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - IMTP - FFRDC Aerospace	MIPR	Aerospace:CA	0.405	0.000		0.000		0.000		-		0.000	0.000	0.405	0.000
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - IMTP - FFRDC/UARC 1	FFRDC	JHU APL:VA	2.989	2.004		0.000		0.000		-		0.000	0.000	4.993	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - IMTP - FFRDC/UARC 2	MIPR	MITRE:VA	0.664	0.445		0.000		0.000		-		0.000	0.000	1.109	0.000
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - IMTP - FFRDC/UARC 3	MIPR	SNL:CA	0.765	0.445		0.000		0.000		-		0.000	0.000	1.210	0.000
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - IMTP - Industry	C/CPAF	Boeing:AL	16.979	15.371		0.000		0.000		-		0.000	0.000	32.350	0.000
Systems Engineering, Engineering Analysis and Quick Response Team - Sys Engrg, QRT - CSS	C/CPFF	CSC:AL	10.548	7.799		1.246	Oct 2012	1.152	Oct 2013	-		1.152	Continuing	Continuing	Continuing
Systems Engineering, Engineering Analysis and Quick Response Team - Sys Engrg, QRT - FFRDC/UARC 1	MIPR	Aerospace:VA	0.487	0.000		0.000		0.000		-		0.000	0.000	0.487	0.000
Systems Engineering, Engineering Analysis and Quick Response Team - Sys Engrg, QRT - FFRDC/UARC 2	MIPR	MITRE:VA	2.888	2.600		0.414	Oct 2012	0.383	Oct 2013	-		0.383	Continuing	Continuing	Continuing
Systems Engineering, Engineering Analysis and Quick Response Team - Sys Engrg, QRT - FFRDC/UARC 3	FFRDC	JHU-APL:VA	0.767	0.000		0.000		0.000		-		0.000	0.000	0.767	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Systems Engineering, Engineering Analysis and Quick Response Team - Sys Engrg, QRT - FFRDC/ UARC 4	MIPR	MIT/LL:MA	0.434	0.000		0.000		0.000		-		0.000	0.000	0.434	0.000
Systems Engineering, Engineering Analysis and Quick Response Team - Sys Engrg, QRT - FFRDC/ UARC 5	MIPR	LLNL:CA	0.293	0.000		0.000		0.000		-		0.000	0.000	0.293	0.000
Systems Engineering, Engineering Analysis and Quick Response Team - Sys Engrg, QRT - Industry	C/CPAF	Boeing:AL	26.380	32.929		5.263	Oct 2012	4.866	Oct 2013	-		4.866	Continuing	Continuing	Continuing
Threat Engineering - Threat Engrg - CSS 1	C/CPFF	Schafer:VA	3.389	0.000		0.000		0.000		-		0.000	0.000	3.389	0.000
Threat Engineering - Threat Engrg - CSS 2	C/CPFF	Torch Technologies:AL	5.747	1.219		3.344	Oct 2012	3.092	Oct 2013	-		3.092	Continuing	Continuing	Continuing
Threat Engineering - Threat Engrg - FFRDC/ UARC 1	FFRDC	JHU APL:VA	1.565	0.226		0.617	Oct 2012	0.570	Oct 2013	-		0.570	Continuing	Continuing	Continuing
Threat Engineering - Threat Engrg - FFRDC/ UARC 2	MIPR	MIT-LL:MA	4.411	0.974		2.671	Oct 2012	2.469	Oct 2013	-		2.469	Continuing	Continuing	Continuing
Threat Engineering - Threat Engrg - FFRDC/ UARC 3	MIPR	SNL:CA	3.478	0.652		1.787	Oct 2012	1.652	Oct 2013	-		1.652	Continuing	Continuing	Continuing
Threat Engineering - Threat Engrg - FFRDC/ UARC 4	MIPR	LLNL:CA	0.865	0.134		0.369	Oct 2012	0.342	Oct 2013	-		0.342	Continuing	Continuing	Continuing
Threat Engineering - Threat Engrg - Industry	C/CPAF	Boeing:AL	2.783	0.000		0.000		0.000		-		0.000	0.000	2.783	0.000
Anti-Tamper and Engineering Manufacturing	MIPR	NSWC Crane:IN	2.674	2.280		1.751	Oct 2012	1.619	Oct 2013	-		1.619	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Readiness Levels Development - AT & EMRL - Anti-Tamper Support															
Anti-Tamper and Engineering Manufacturing Readiness Levels Development - AT & EMRL - CSS/Travel	C/CPFF	DRC, Cobham:CA	2.092	0.798		0.614	Oct 2012	0.568	Oct 2013	-		0.568	Continuing	Continuing	Continuing
Anti-Tamper and Engineering Manufacturing Readiness Levels Development - AT & EMRL - Commonality and Standards	C/CPFF	DRAPER:MA	2.822	3.443		2.646	Oct 2012	2.446	Oct 2013	-		2.446	Continuing	Continuing	Continuing
Independent Technical Assessment - Independ Tech Assess - FFRDC/ UARC 1	MIPR	Aerospace:CA	8.605	2.331		2.829	Oct 2012	2.615	Oct 2013	-		2.615	Continuing	Continuing	Continuing
Independent Technical Assessment - Independ Tech Assess - FFRDC/ UARC 2	FFRDC	JHU APL:VA	3.746	1.305		1.583	Oct 2012	1.464	Oct 2013	-		1.464	Continuing	Continuing	Continuing
Independent Technical Assessment - Independ Tech Assess - FFRDC/ UARC 3	FFRDC	Draper :MA	1.446	0.000		0.000		0.000		-		0.000	0.000	1.446	0.000
Independent Technical Assessment - Independ Tech Assess - FFRDC/ UARC 4	MIPR	GTRI:GA	5.337	1.399		1.697	Oct 2012	1.569	Oct 2013	-		1.569	Continuing	Continuing	Continuing
Independent Technical Assessment - Independ Tech Assess - FFRDC/ UARC 5	MIPR	JPL:CA	0.931	0.000		0.000		0.000		-		0.000	0.000	0.931	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Independent Technical Assessment - Independ Tech Assess - FFRDC/UARC 6	MIPR	MIT/LL:MA	10.416	2.704		3.281	Oct 2012	3.033	Oct 2013	-		3.033	Continuing	Continuing	Continuing
Independent Technical Assessment - Independ Tech Assess - FFRDC/UARC 7	MIPR	MITRE:VA	6.120	1.585		1.923	Oct 2012	1.778	Oct 2013	-		1.778	Continuing	Continuing	Continuing
Independent Technical Assessment - Independ Tech Assess - FFRDC/UARC 8	MIPR	ORNL:TN	0.746	0.000		0.000		0.000		-		0.000	0.000	0.746	0.000
Independent Technical Assessment - Independ Tech Assess - FFRDC/UARC 9	MIPR	LLNL:CA	0.240	0.000		0.000		0.000		-		0.000	0.000	0.240	0.000
Knowledge Centers - KC - FFRDC/UARC 1	MIPR	Aerospace:CA	1.912	2.365		3.428	Oct 2012	3.169	Oct 2013	-		3.169	Continuing	Continuing	Continuing
Knowledge Centers - KC - FFRDC/UARC 10	MIPR	SEI:PA	0.064	0.079		0.116	Oct 2012	0.107	Oct 2013	-		0.107	Continuing	Continuing	Continuing
Knowledge Centers - KC - FFRDC/UARC 2	MIPR	MIT/LL:MA	1.050	1.298		1.882	Oct 2012	1.740	Oct 2013	-		1.740	Continuing	Continuing	Continuing
Knowledge Centers - KC - FFRDC/UARC 3	FFRDC	MITRE:VA	0.812	1.004		1.453	Oct 2012	1.343	Oct 2013	-		1.343	Continuing	Continuing	Continuing
Knowledge Centers - KC - FFRDC/UARC 4	FFRDC	JHU/APL:VA	0.967	1.195		1.731	Oct 2012	1.600	Oct 2013	-		1.600	Continuing	Continuing	Continuing
Knowledge Centers - KC - FFRDC/UARC 5	FFRDC	SDL:MA	0.096	0.119		0.172	Oct 2012	0.159	Oct 2013	-		0.159	Continuing	Continuing	Continuing
Knowledge Centers - KC - FFRDC/UARC 6	MIPR	Draper:MA	0.755	0.933		1.350	Oct 2012	1.248	Oct 2013	-		1.248	Continuing	Continuing	Continuing
Knowledge Centers - KC - FFRDC/UARC 7	MIPR	GTRI:GA	1.009	1.247		1.809	Oct 2012	1.672	Oct 2013	-		1.672	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Knowledge Centers - KC - FFRDC/UARC 8	MIPR	JPL:CA	0.490	0.606		0.878	Oct 2012	0.812	Oct 2013	-		0.812	Continuing	Continuing	Continuing
Knowledge Centers - KC - FFRDC/UARC 9	MIPR	ORNL:TN	0.382	0.472		0.684	Oct 2012	0.632	Oct 2013	-		0.632	Continuing	Continuing	Continuing
Knowledge Centers - KC - OGA	MIPR	AMRDEC:AL	0.025	0.031		0.047	Oct 2012	0.045	Oct 2013	-		0.045	Continuing	Continuing	Continuing
Knowledge Centers - KC - Other	MIPR	Northrop Grumman:VA	0.076	0.094		0.136	Oct 2012	0.126	Oct 2013	-		0.126	Continuing	Continuing	Continuing
Risk Management - Risk Mgt - CSS	C/CPFF	MEI:AL	0.000	0.656		3.490	Oct 2012	3.225	Oct 2013	-		3.225	Continuing	Continuing	Continuing
Risk Management - Risk Mgt - FFRDC/UARC	MIPR	MITRE:VA	0.000	0.392		2.068	Oct 2012	1.912	Oct 2013	-		1.912	Continuing	Continuing	Continuing
Risk Management - Risk Mgt - Other 1	MIPR	DAU:VA	0.000	0.026		0.139	Oct 2012	0.129	Oct 2013	-		0.129	Continuing	Continuing	Continuing
Risk Management - Risk Mgt - Other 2	MIPR	MDA/DOI:VA	0.000	0.044		0.231	Oct 2012	0.214	Oct 2013	-		0.214	Continuing	Continuing	Continuing
Manufacturing and Producibility - CSS 1	C/CPFF	tbd:tbd	0.000	0.000		0.000		4.500		-		4.500	Continuing	Continuing	Continuing
Discrimination - Support	MIPR	MDA:AL	0.000	0.000		0.000		16.600		-		16.600	Continuing	Continuing	Continuing
Subtotal			224.359	134.820		88.315		102.979		0.000		102.979			

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - T&E	C/CPAF	Boeing:VA	12.057	0.000		0.000		0.000		-		0.000	0.000	12.057	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
IMTP - BMDS Level Testing															
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - T&E IMTP - BMDS Level Testing 1	C/CPFF	CSC:VA	2.462	0.000		0.000		0.000		-		0.000	0.000	2.462	0.000
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - T&E IMTP - BMDS Level Testing 2	FFRDC	JHU APL:VA	1.731	0.000		0.000		0.000		-		0.000	0.000	1.731	0.000
Threat Engineering - T&E Threat Engrg - CSS 1	C/CPFF	CSC:VA	1.974	0.000		0.000		0.000		-		0.000	0.000	1.974	0.000
Threat Engineering - T&E Threat Engrg - CSS 2	C/CPFF	Cobham:CA	1.385	0.000		0.000		0.000		-		0.000	0.000	1.385	0.000
Threat Engineering - T&E Threat Engrg - Industry	C/CPAF	Boeing:VA	4.585	0.000		0.000		0.000		-		0.000	0.000	4.585	0.000
Subtotal			24.194	0.000		0.000		0.000		0.000		0.000	0.000	24.194	0.000

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency							DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>			PROJECT MD24: <i>System Engineering & Integration</i>				
	All Prior Years	FY 2012		FY 2013		FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	248.553	134.820		88.315		102.979	0.000	102.979			

Remarks

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Update to Ballistic Missile Defense System Interface Control Document (SICD) FY 2013							△																					
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2012	▲																											
Aegis BMD 5.1 System Requirements Review #2 (SRR#2)	▲																											
Phased Adaptive Approach Quarterly Status Review #3	▲																											
Aegis Ashore Critical Design Review	▲																											
Ballistic Missile Defense System Specification (BMD SS) - FY 2011/12		▲																										
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2012		▲																										
Integrated Master Assessment Plan (IMAP) / Update - FY 2012		▲																										
Phased Adaptive Approach Quarterly Status Review #4		▲																										
Aegis BMD 5.1 System Design Review (SDR) #1		▲																										
Element Preliminary Design Reviews - FY 2012		▲																										
Adversary Data Package (ADP) - FY 2012		▲																										
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2012		▲																										
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2012			▲																									
Phased Adaptive Approach Ballistic Missile Defense System Requirements Review #1			▲																									
BMD System Requirements Review (SRR) Part 1			▲																									
Phased Adaptive Approach (PAA) Capability Planning Specifications (CPS) - FY 2012-C2BMC			▲																									
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2012				▲																								
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2012				▲																								
Phased Adaptive Approach Ballistic Missile Defense System Requirements Review #2				▲																								

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity +
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity +

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Phased Adaptive Approach (PAA) Capability Planning Specifications (CPS) - FY 2012			▲																									
Provide Independent Assessments to MDA - FY 2012			▲																									
Master Integration Plan (MIP) - FY 2012			▲																									
Update to Ballistic Missile Defense System Description Document (BMD SDD) - FY 2013				△																								
Adversary Data Package (ADP) - FY 2013				△																								
System/Subsystem Requirements Review - FY 2013				△																								
Aegis BMD 5.1 System Design Review (SDR) #2				△																								
Phased Adaptive Approach Quarterly Status Review #7				△																								
BMD System Requirements Review (SRR) Part 2				△																								
Precision Tracking Space System First Article Preliminary Design Review				☆																								
Ballistic Missile Defense System Specification (BMD SS) - FY 2013					△																							
Integrated Master Assessment Plan (IMAP) / Update - FY 2013					△																							
Phased Adaptive Approach Quarterly Status Review #8					△																							
System Engineering Plan (SEP) Update - FY 2013					△																							
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2013					△																							
Element Preliminary Design Reviews - FY 2013					△																							
Aegis BMD 5.1 System Design Review (SDR) #3						△																						
Ballistic Missile Defense System Design Review - FY 2013						△																						
Provide Independent Assessments to MDA - FY 2013							△																					
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2013							△																					
Master Integration Plan (MIP) - FY 2013							△																					
Update Phased Adaptive Approach Capability Planning Specifications (CPS) - FY 2013							△																					

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity +
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✦

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2013								▲																				
Aegis BMD 5.1 Preliminary Design Review (PDR)								▲																				
Adversary Data Package (ADP) - FY 2014								▲																				
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2014								▲																				
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2014										▲																		
Element Preliminary Design Reviews - FY 2014										▲																		
Ballistic Missile Defense System Design Review - FY 2014											▲																	
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2014											▲																	
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2014												▲																
Provide Independent Assessments to MDA - FY 2014													▲															
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2014													▲															
Update to Ballistic Missile Defense System Description Document (BMD SDD) - FY2015														▲														
System/Subsystem Requirements Review - FY 2015														▲														
Adversary Data Package (ADP) - FY 2015														▲														
Ballistic Missile Defense System Specification (BMD SS) - FY 2015															▲													
Element Preliminary Design Reviews - FY 2015															▲													
System Engineering Plan (SEP) Update - FY 2015															▲													
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2015															▲													
Ballistic Missile Defense System Design Review - FY 2015																▲												
Provide Independent Assessments to MDA - FY 2015																	▲											
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2015																		▲										

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2015															△													
Adversary Data Package (ADP) - FY 2016															△													
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2016															△													
Element Preliminary Design Reviews - FY 2016																△												
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2016																△												
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2016																	△											
Ballistic Missile Defense System Design Review - FY 2016																	△											
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2016																		△										
Provide Independent Assessments to MDA - FY 2016																			△									
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2016																			△									
Update to Ballistic Missile Defense System Description Document (BMD SDD) - FY2017																				△								
Adversary Data Package (ADP) - FY 2017																					△							
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2017																						△						
Ballistic Missile Defense System Specification (BMD SS) - FY 2017																							△					
Element Preliminary Design Reviews - FY 2017																								△				
System Engineering Plan (SEP) Update - FY 2017																								△				
Ballistic Missile Defense System Design Review - FY 2017																									△			
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2017																										△		
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2017																											△	
Provide Independent Assessments to MDA - FY 2017																												△
Adversary Data Package (ADP) - FY 2018																												△

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Update to Ballistic Missile Defense System Interface Control Document (SICD) FY 2013	3	2013	3	2013
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2012	1	2012	1	2012
Aegis BMD 5.1 System Requirements Review #2 (SRR#2)	1	2012	1	2012
Phased Adaptive Approach Quarterly Status Review #3	1	2012	1	2012
Aegis Ashore Critical Design Review	1	2012	1	2012
Ballistic Missile Defense System Specification (BMD SS) - FY 2011/12	2	2012	2	2012
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2012	2	2012	2	2012
Integrated Master Assessment Plan (IMAP) / Update - FY 2012	2	2012	2	2012
Phased Adaptive Approach Quarterly Status Review #4	2	2012	2	2012
Aegis BMD 5.1 System Design Review (SDR) #1	2	2012	2	2012
Element Preliminary Design Reviews - FY 2012	2	2012	2	2012
Adversary Data Package (ADP) - FY 2012	2	2012	2	2012
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2012	2	2012	2	2012
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2012	3	2012	3	2012
Phased Adaptive Approach Ballistic Missile Defense System Requirements Review #1	3	2012	3	2012
BMD System Requirements Review (SRR) Part 1	3	2012	3	2012
Phased Adaptive Approach (PAA) Capability Planning Specifications (CPS) - FY 2012-C2BMC	3	2012	3	2012
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2012	4	2012	4	2012
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2012	4	2012	4	2012
Phased Adaptive Approach Ballistic Missile Defense System Requirements Review #2	4	2012	4	2012
Phased Adaptive Approach (PAA) Capability Planning Specifications (CPS) - FY 2012	4	2012	4	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Provide Independent Assessments to MDA - FY 2012	4	2012	4	2012
Master Integration Plan (MIP) - FY 2012	4	2012	4	2012
Update to Ballistic Missile Defense System Description Document (BMD SDD) - FY 2013	1	2013	1	2013
Adversary Data Package (ADP) - FY 2013	1	2013	1	2013
System/Subsystem Requirements Review - FY 2013	1	2013	1	2013
Aegis BMD 5.1 System Design Review (SDR) #2	1	2013	1	2013
Phased Adaptive Approach Quarterly Status Review #7	1	2013	1	2013
BMD System Requirements Review (SRR) Part 2	1	2013	1	2013
Precision Tracking Space System First Article Preliminary Design Review	1	2013	1	2013
Ballistic Missile Defense System Specification (BMD SS) - FY 2013	2	2013	2	2013
Integrated Master Assessment Plan (IMAP) / Update - FY 2013	2	2013	2	2013
Phased Adaptive Approach Quarterly Status Review #8	2	2013	2	2013
System Engineering Plan (SEP) Update - FY 2013	2	2013	2	2013
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2013	2	2013	2	2013
Element Preliminary Design Reviews - FY 2013	2	2013	2	2013
Aegis BMD 5.1 System Design Review (SDR) #3	3	2013	3	2013
Ballistic Missile Defense System Design Review - FY 2013	3	2013	3	2013
Provide Independent Assessments to MDA - FY 2013	4	2013	4	2013
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2013	4	2013	4	2013
Master Integration Plan (MIP) - FY 2013	4	2013	4	2013
Update Phased Adaptive Approach Capability Planning Specifications (CPS) - FY 2013	4	2013	4	2013
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2013	4	2013	4	2013
Aegis BMD 5.1 Preliminary Design Review (PDR)	1	2014	1	2014
Adversary Data Package (ADP) - FY 2014	1	2014	1	2014
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2014	1	2014	1	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2014	2	2014	2	2014
Element Preliminary Design Reviews - FY 2014	2	2014	2	2014
Ballistic Missile Defense System Design Review - FY 2014	3	2014	3	2014
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2014	3	2014	3	2014
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2014	4	2014	4	2014
Provide Independent Assessments to MDA - FY 2014	4	2014	4	2014
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2014	4	2014	4	2014
Update to Ballistic Missile Defense System Description Document (BMD SDD) - FY2015	1	2015	1	2015
System/Subsystem Requirements Review - FY 2015	1	2015	1	2015
Adversary Data Package (ADP) - FY 2015	1	2015	1	2015
Ballistic Missile Defense System Specification (BMD SS) - FY 2015	2	2015	2	2015
Element Preliminary Design Reviews - FY 2015	2	2015	2	2015
System Engineering Plan (SEP) Update - FY 2015	2	2015	2	2015
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2015	2	2015	2	2015
Ballistic Missile Defense System Design Review - FY 2015	3	2015	3	2015
Provide Independent Assessments to MDA - FY 2015	4	2015	4	2015
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2015	4	2015	4	2015
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2015	4	2015	4	2015
Adversary Data Package (ADP) - FY 2016	1	2016	1	2016
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2016	1	2016	1	2016
Element Preliminary Design Reviews - FY 2016	2	2016	2	2016
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2016	2	2016	2	2016
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2016	3	2016	3	2016
Ballistic Missile Defense System Design Review - FY 2016	3	2016	3	2016
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2016	4	2016	4	2016

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Provide Independent Assessments to MDA - FY 2016	4	2016	4	2016
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2016	4	2016	4	2016
Update to Ballistic Missile Defense System Description Document (BMD SDD) - FY2017	1	2017	1	2017
Adversary Data Package (ADP) - FY 2017	1	2017	1	2017
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2017	2	2017	2	2017
Ballistic Missile Defense System Specification (BMD SS) - FY 2017	2	2017	2	2017
Element Preliminary Design Reviews - FY 2017	2	2017	2	2017
System Engineering Plan (SEP) Update - FY 2017	2	2017	2	2017
Ballistic Missile Defense System Design Review - FY 2017	3	2017	3	2017
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2017	4	2017	4	2017
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2017	4	2017	4	2017
Provide Independent Assessments to MDA - FY 2017	4	2017	4	2017
Adversary Data Package (ADP) - FY 2018	1	2018	1	2018
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2018	1	2018	1	2018
Element Preliminary Design Reviews - FY 2018	2	2018	2	2018
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2018	2	2018	2	2018
Ballistic Missile Defense System Design Review - FY 2018	3	2018	3	2018
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2018	3	2018	3	2018
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2018	4	2018	4	2018
Provide Independent Assessments to MDA - FY 2018	4	2018	4	2018
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2018	4	2018	4	2018

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
MT23: <i>Enabling - Test</i>	-	0.000	32.386	42.850	-	42.850	65.609	41.407	37.078	35.661	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

N/A

A. Mission Description and Budget Item Justification

In the Enabling program's test project, Systems Engineering and Integration drives Ballistic Missile Defense System (BMDS) planning, execution, and post-test assessment, providing critical data to prove that missile defense works as designed.

System Engineering and Integration (SE&I) Major Program Goals for the Integrated Master Test Plan (IMTP):

- Verify and Assess BMDS performance and capabilities through testing
- Develop BMDS Performance Assessment parameters
- Identify the Critical Engagement Conditions and data required to develop the test campaigns that will demonstrate regional defense performance, and verify and assess the capability of each Phased Adaptive Approach (PAA)
- Define the test objectives necessary to anchor BMDS-level models and simulations, enable independent verification and validation, and identify System issues occurring in ground and flight tests
- Identify BMDS capabilities and limitations
- Develop, manage and use BMDS level Modeling and Simulation (M&S) to verify BMDS performance in system operational regions outside the live fire testing regions.

During test integration, verification, and model validation, engineering studies and analyses enable the allocation of test requirements to individual test events, design of test architectures, definition of target requirements, and generation of appropriate scenarios for ground and flight tests, in order to collect the required model validation data. With the support of the Director of Operational Test and Evaluation (DOT&E), SE&I works with the Services' Operational Test Agencies (OTA) to incorporate operational test requirements under development to ensure the incremental capability being transferred to the Warfighter will be operationally effective, suitable, and survivable. SE&I leads test failure review boards, identifies shortfalls in data collection, and reallocates objectives to future test events until all identified model validation data is collected. Reliability, Availability and Maintainability data is collected through the Joint Reliability and Maintainability Engineering Team (JRMET) and quarterly data scoring boards with the Elements, to Warfighter commanders and increases the confidence levels in the predicted performance of the BMDS. BMDS Test Incident Reports document abnormal system behavior that occurs during System-level tests and alert MDA to issues with test article reliability. The Failure Reporting, Analysis, and Corrective Action System (FRACAS) provides a framework to investigate System test failures and anomalies and to identify solutions that will ultimately improve BMDS performance and reliability.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>

BMDS Level Testing: SE&I identifies and coordinates test objectives that define the basic test design development and ensure BMDS requirements are being met by the BMD System under test. Systems Engineering plays a key role in Ballistic Missile Defense test design and development by defining, allocating to test events, and tracking Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs), as documented in the Integrated Master Test Plan (IMTP). The CECs and EMEs include key test points allocated to test events to ensure that the design of the BMDS test includes data collection to show proper system operation; they also provide validation, verification, and assessment data for the digital models and simulations used to predict BMDS performance. These models and simulations, along with the rigorous test and verification process, will be used to demonstrate BMDS performance in areas where no live-fire-testing is performed and provide direct support to the fielding decisions and BMDS deployed operations.

System Pre-Mission Testing and Post-Flight Reconstruction: SE&I supports System Pre-Mission predictions for system level flight tests using the test framework set up with the BMDS configuration for a particular flight test. This provides confidence readiness for Flight Test execution by predicting BMDS performance and exercising element interfaces. This work also ensures the flight test will collect the required data (including Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs)) and the data management plan will support System and Element Post-Flight Reconstruction (SPFR) objectives. System Post-Flight Reconstruction uses a hardware-in-the-loop (HWIL) and/or Digital Modeling and Simulation Environment to replicate the day of flight for the BMDS configuration, including the actual environmental conditions and target dynamics observed in the test. The results of this process increase confidence in the models and simulations by anchoring the results to the real world event, with emphasis on the CECs and EMEs. System and Element Post-Flight Reconstructions are used for validation (anchoring) of BMDS and Element models and simulations.

Collection opportunities for CECs and EMEs span a number of years, based on planned test events. To date, MDA has completed collection opportunities across the PAA phases:

- PAA Phase 1: 44% Completed in FY 2012, 51% projected for completion in FY 2013, 63% projected for completion in FY 2014
- PAA Phase 2: 35% Completed in FY 2012, 42% projected for completion in FY 2013, 57% projected for completion in FY 2014
- PAA Phases 3 and 4: 40% Completed in FY 2012, 46% projected for completion in FY 2013, 58% projected for completion in FY 2014
- Homeland Defense and Other: 31% Completed in FY 2012, 40% projected for completion in FY 2013, 54% projected for completion in FY 2014

Modeling & Simulation (M&S) Integrated Master Test Plan (IMTP) Mission Support: The distinct capabilities of MDA's M&S systems and products are ingrained throughout the BMDS and provide the Warfighter and Operational Test Agency (OTA) with an evaluation capability for individual components as well as overall M&S system-of-systems. MDA validates and accredits system-level models and simulations by anchoring them to real-world events to support accurate and comprehensive assessments of the BMDS. Future M&S development activities will focus on the model and simulation frameworks, BMDS Element models, as well as core truth modeling (e.g., threat, phenomenology, lethality, and environment). The success of the missile defense program is enabled by quality M&S systems and products that help prove BMDS technologies work. In particular, MDA M&S System and Product testing is based on an integrated, comprehensive, and phased test program as outlined in MDA's IMTP. Within the construct of the IMTP, MDA Element unique M&S systems, subsystems, and components are tested as part of their respective development and integration, a necessary precursor to conducting BMD System-level M&S testing (e.g., integrated ground test, performance/technical assessment

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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venues). Resources for the planning, design, execution and management of this testing are provided in accordance with the BMDS Test Policy, as listed in the most current version of the IMTP.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
<p>Title: Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE/I</p> <p align="right">Articles:</p> <p>Description: The SE&I IMTP effort develops Ballistic Missile Defense System (BMDS) test objectives and scenarios, and participates in test planning, execution, and post-test assessment.</p> <p>FY 2012 Accomplishments: N/A</p> <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - Update the Master Integration Plan (MIP) to incorporate changes in planned delivery of BMDS content. - Provide engineering inputs for Integrated Master Test Plan (IMTP) updates using the Planning Allocation Matrix (PAM) tool to identify integration, test, assessment, and verification activities. - Collect BMDS Suitability Data through the Joint Reliability and Maintainability Engineering Team (JRMET) Data Scoring Boards. - Provide pre- and post-test support for the Failure Reporting, Analysis, and Corrective Action System, which investigates BMDS test failures and identifies solutions that enhance reliability. - Define and execute required performance assessments to support incremental capability deliveries. - Provide monthly updates for BMDS verification status. - Conduct BMDS Critical Design Review to document requirements used for performance assessments of incremental deliveries. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> -Provide engineering inputs for IMTP updates: identify integration, test, assessment, and verification activities. -Collect BMDS reliability and maintainability data and document requirements for successful completion of test events. -Provide pre- and post-test support for the Failure Reporting, Analysis, and Corrective Action System (FRACAS), which investigates BMDS test failures and anomalies and identifies solutions that enhance system performance and reliability. -Define, execute, and document results of required performance assessments supporting incremental capability deliveries. -Update the Integrated Master Assessment Plan (IMAP) semi-annually to address changes in planned delivery of Ballistic Missile Defense System content as reflected in the Ballistic Missile Defense System Description Document (BMD SDD), the Ballistic Missile Defense System Specification (BMD SS), Master Integration Plan, and detailed design and development documentation. Update also reflects changes to BMDS deployment and utilization. -Produce FY 2014 Systems Engineering Assessment Report (SEAR) to incorporate FY 2013 test and assessment results. -Complete Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) collection opportunities: <ul style="list-style-type: none"> -- PAA Phase 1: Complete 12% of CEC collection opportunities (total 63%) 	<p>0.000</p> <p>0</p>	<p>18.136</p> <p>0</p>	<p>31.809</p> <p>0</p>

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MT23: <i>Enabling - Test</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> -- PAA Phase 2: Complete 15% of CEC collection opportunities (total 57%) -- PAA Phases 3 and 4: Complete 12% of CEC collection opportunities (total 58%) -- Homeland Defense and Other: Complete 14% of CEC collection opportunities (total 54%) 				
<p>Title: Modeling/Simulation (M/S) Verification, Validation and Accreditation (VV/A) and Test Operations</p> <p align="right">Articles:</p>		0.000 0	14.250 0	11.041 0
<p>Description: The M&S Integrated Master Test Plan (IMTP) effort integrates Single Stimulation Framework (SSF), Digital Simulation Architecture (DSA) and Objective Simulation Framework (OSF) products with MDA and Non-MDA element models, core truth components and Hardware in the Loop (HWIL) assets to form Ballistic Missile Defense System (BMDS) architectures for the execution of IMTP events.</p> <p>FY 2012 Accomplishments: N/A</p> <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - Event Support Operations - Collaborate with Elements, Test Community, System Engineering, and Operational Test Agencies (OTAs) to ensure Modeling and Simulation (M&S) for each event meet intended uses and objectives, and have proper Verification, Validation, and Accreditation (VV&A) documentation and evidence, to include benchmarking/anchoring pedigree - System Level Education, Validation and Accreditation (VV&A) - Planned/On-going: Develop integrated Verification, Validation and Accreditation (VV&A) event Plans and Reports for Focused Ground Tests, Integrated Ground Tests, Performance Assessments, Assured Response and Global Defender Exercises in accordance with events planned per the current approved Integrated Master Test Plan (IMTP) - Provide Annual Accreditation Assessment, Report and Briefing with Recommendations for critical M&S Improvements to align with end of year BMDS Operational Test Agency (OTA) Accreditation reporting and MDA President's Budget (PB) investment strategy efforts. - Planned/On-going: Plan and specify system post-flight reconstructions events so as to optimize the body of evidence and analysis supporting system-level BMDS accreditation; perform all system-level VV&A associated with Digital and Hardware-in-the-loop (HWIL) System Post Flight Reconstructions, in accordance with activities prioritized, funded and resourced per the current approved Integrated Master Test Plan (IMTP) 				

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Planned/On-going: Work closely with Elements, Test Community, System Engineering, and Operational Test Agency (OTA) to ensure M&S for each event meets intended uses and objectives, and has proper VV&A documentation and evidence, to include benchmarking/anchoring pedigree - Planned/On-going: Conduct system-level verification and validation of threat trajectory and signature, of end-to-end environmental implementation (consistent and correct), of modeled communications and architecture (behave properly) and evaluate that M&S interoperability is adequately addressed - Planned/On-going: Update or develop M&S Directives, Policies, Standards and Methodology Guides to support advancements in VV&A process and methodology to maximize improvement to M&S Accreditation. - Planned/On-going: Conduct annual review of BMDS Element VV&A programs and provide recommendations for improvements in M&S capabilities and planned Verification and Validation (V&V) activities to accelerate and optimize M&S Accreditation - Planned/On-going: Lead BMDS VV&A working group (VVAWG) and Verification, Validation and Accreditation Control Board (VVACB) to improve VV&A operations and ultimately improve BMDS M&S performance and accreditation - Planned/On-going: Ensure that individual BMDS elements and components properly VV&A their own models - Planned/On-going: Develop and present M&S objectives, event requirements, Accreditation status and strategic VV&A plans as part of MDA BMDS Integrated Master Test Plan (IMTP) development. - Planned/On-going: Develop and/or update additional chapters/volumes of the Integrated Master VV&A Plan (IMVP) to align long-range VV&A planning with MDA long-range planned events, assessments and fielding decisions. - Develop threat trajectories and integrated threat packages to support Modeling and Simulation (M&S) frameworks and execute MDA Integrated Master Test Plan (IMTP) events to include Performance Assessments (PAs), Ground Tests, Operational Tests, Flight Tests and Combatant Command (COCOM) Exercises - Complete integration of National Air and Space Intelligence Center (NASIC) missile model capability into Threat Modeling Simulation System (TMSS) to produce intelligence-credible threat products for IMTP events - Support accreditation for Kinetic Impact Debris Distribution (KIDD) as post-intercept debris modeling tool - Support accreditation for Parametric Endo/Exo-atmospheric Lethality Simulation (PEELS) as engagement lethality modeling tool for Patriot PAC-3, THAAD, and GM - Plan and produce re-entry vehicle (RV) and kill vehicle (KV) model products using M&S lethality tools, KIDD and PEELS, for Flight Test, Ground Test, Performance Assessments/Technical Assessments (PA/TAs), wargames, and exercises - Event Integration/Support Operations - Product Level Verification, Validation & Accreditation (VV&A) - Conduct requirements management for product VV&A (e.g., OSC, OPTISIG, KIDD, PEELS, PEGEM) - Conduct Independent Verification & Validation (IV&V) on Core Lethality Models (PEELS, KIDD) product modifications 			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
- Develop missile model and integrated threat package Verification & Validation (V&V) reports to support Integrated Master Test Plan (IMTP) events <i>FY 2014 Plans:</i> -Integrate, test, functionally qualify, and deliver end-to-end BMDS simulations supporting various uses. -Develop and establish Hardware-in-the-loop (HWIL) M&S Integration Test Cases for Ground and Flight Tests (Pre-Post Mission). -Conduct M&S HWIL Integration Bench Mark testing for Ground and Flight Tests (Pre-Post Mission), by integrating the BMDS HWIL M&S framework with MDA and non-MDA Elements into the test event BMDS architecture. -Develop and present M&S objectives, event requirements, Accreditation status and strategic VV&A plans as part of MDA BMDS Integrated Master Test Plan (IMTP) development. -Conduct specified system post-flight reconstructions and pre-mission testing events so as to optimize the body of evidence and analysis supporting system-level BMDS accreditation; perform all system-level Verification, Validation & Accreditation (VV&A) associated with these events as reflected in the IMTP. FY 2014 decrease is consistent with the activities defined in the IMTP.			
Accomplishments/Planned Programs Subtotals	0.000	32.386	42.850

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,143.313	903.172	1,033.903		1,033.903	1,045.500	1,002.568	815.198	781.824	Continuing	Continuing
• 0603888C: <i>Ballistic Missile Defense Test & Targets</i>	88.162	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	88.162
• 0603904C: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	58.970	63.043	52.131		52.131	59.893	52.005	61.751	53.511	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	484.838	454.400	375.866		375.866	436.063	378.063	400.157	451.776	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	497.550	435.747	495.257		495.257	516.092	406.611	481.527	463.660	Continuing	Continuing

Remarks

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>

D. Acquisition Strategy

In order to optimize the performance of the BMDS, MDA leverages the nation's engineering Centers of Excellence at government agencies and Military Services, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and industry. The executing agents utilize various contracting strategies in a flexible manner to maximize their contribution to the BMDS. Products and Services will be acquired by competitive means to the extent that is possible and practical.

E. Performance Metrics

N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE/I - IMTP SE&I - CSS	C/CPFF	CSC:AL	0.000	0.000		3.258	Oct 2012	5.714	Oct 2013	-		5.714	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE/I - IMTP SE&I - FFRDC/ UARC 1	FFRDC	JHU APL:VA	0.000	0.000		1.632		2.862	Oct 2013	-		2.862	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE/I - IMTP SE&I - FFRDC/ UARC 2	MIPR	MITRE:VA	0.000	0.000		0.362	Oct 2012	0.635	Oct 2013	-		0.635	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE/I - IMTP SE&I - FFRDC/ UARC 3	MIPR	SNL:CA	0.000	0.000		0.363	Oct 2012	0.637	Oct 2013	-		0.637	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification	C/CPAF	Boeing:AL	0.000	0.000		12.521	Oct 2012	21.961	Oct 2013	-		21.961	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
and Assessment - SE/I - IMTP SE&I - Industry															
Modeling/Simulation (M/S) Verification, Validation and Accreditation (VV/A) and Test Operations - IMTP M&S - Ground Test VV&A	C/CPAF	Northrop Grumman:CO	0.000	0.000		3.040	Oct 2012	2.355	Oct 2013	-		2.355	Continuing	Continuing	Continuing
Modeling/Simulation (M/S) Verification, Validation and Accreditation (VV/A) and Test Operations - IMTP M&S - M&S Accreditation	C/CPAF	Northrop Grumman:CO	0.000	0.000		3.426	Oct 2012	2.655	Oct 2013	-		2.655	Continuing	Continuing	Continuing
Modeling/Simulation (M/S) Verification, Validation and Accreditation (VV/A) and Test Operations - IMTP M&S - Performance Assessment VV&A	C/CPAF	Northrop Grumman:CO	0.000	0.000		7.784	Oct 2012	6.031	Oct 2013	-		6.031	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		32.386		42.850		0.000		42.850			

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	32.386	42.850	0.000	42.850			

Remarks
N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Engineering Assessment Report (SEAR) - FY 2013				△																								
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2013					△																							
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2013							△																					
Master Integration Plan (MIP) - FY 2013							△																					
System Engineering Assessment Report (SEAR) - FY 2014								△																				
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2014								△																				
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2014									△																			
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2014										△																		
Master Integration Plan (MIP) - FY 2014											△																	
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2014											△																	
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2015												△																
System Engineering Assessment Report (SEAR) - FY 2015													△															
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2015														△														
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2015															△													
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2015																△												
Master Integration Plan (MIP) - FY 2015																	△											
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2016																		△										
System Engineering Assessment Report (SEAR) - FY 2016																			△									
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2016																				△								

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2016																			△									
Master Integration Plan (MIP) - FY 2016																			△									
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2016																			△									
System Engineering Assessment Report (SEAR) - FY 2017																				△								
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2017																				△								
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2017																					△							
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2017																						△						
Master Integration Plan (MIP) - FY 2017																						△						
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2017																						△						
System Engineering Assessment Report (SEAR) - FY 2018																							△					
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2018																							△					
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2018																								△				
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2018																									△			
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2018																											△	
Master Integration Plan (MIP) - FY 2018																											△	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Engineering Assessment Report (SEAR) - FY 2013	1	2013	1	2013
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2013	2	2013	2	2013
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2013	4	2013	4	2013
Master Integration Plan (MIP) - FY 2013	4	2013	4	2013
System Engineering Assessment Report (SEAR) - FY 2014	1	2014	1	2014
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2014	1	2014	1	2014
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2014	2	2014	2	2014
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2014	3	2014	3	2014
Master Integration Plan (MIP) - FY 2014	4	2014	4	2014
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2014	4	2014	4	2014
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2015	1	2015	1	2015
System Engineering Assessment Report (SEAR) - FY 2015	1	2015	1	2015
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2015	2	2015	2	2015
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2015	3	2015	3	2015
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2015	4	2015	4	2015
Master Integration Plan (MIP) - FY 2015	4	2015	4	2015
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2016	1	2016	1	2016
System Engineering Assessment Report (SEAR) - FY 2016	1	2016	1	2016
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2016	2	2016	2	2016
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2016	3	2016	3	2016
Master Integration Plan (MIP) - FY 2016	4	2016	4	2016
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2016	4	2016	4	2016

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
System Engineering Assessment Report (SEAR) - FY 2017	1	2017	1	2017
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2017	1	2017	1	2017
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2017	2	2017	2	2017
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2017	3	2017	3	2017
Master Integration Plan (MIP) - FY 2017	4	2017	4	2017
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2017	4	2017	4	2017
System Engineering Assessment Report (SEAR) - FY 2018	1	2018	1	2018
Update to Integrated Master Assessment Plan (IMAP) - 1Q - FY 2018	1	2018	1	2018
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2018	2	2018	2	2018
Update to Integrated Master Assessment Plan (IMAP) - 3Q - FY 2018	3	2018	3	2018
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2018	4	2018	4	2018
Master Integration Plan (MIP) - FY 2018	4	2018	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
MD28: <i>Intelligence & Security</i>	61.494	18.937	36.886	32.161	-	32.161	32.194	34.323	33.939	35.542	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012
^{##} The FY 2014 OCO Request will be submitted at a later date

Note
 Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification
 Intelligence and Security Program Major Program Goals:
 - Ensure the Intelligence Community understands and fulfills the Missile Defense Agency`s (MDA`s) current and future prioritized intelligence requirements in an accurate and timely manner; advocate Ballistic Missile Defense System (BMDS) test support collection requirements with the Intelligence Community; and ensure that MDA`s intelligence needs and finished intelligence requirements are understood while ensuring the Intelligence Community is involved in technical interchange meetings.
 - Continue the federated approach to supporting MDA by leveraging available National and Department of Defense (DoD) Counterintelligence resources to ensure counterintelligence products and services are fully integrated into all Research, Development, Test & Evaluation (RDT&E) programs and activities to protect classified information and critical technologies and to support and protect MDA and BMDS personnel, facilities, information and activities from criminal, terrorist and Foreign Intelligence and Security Service targeting/threats.
 - Consistently and comprehensively define cyber security systems engineering requirements for Continental United States (CONUS) and non-CONUS based BMDS assets. Define cyber security systems engineering and cyber security infrastructure intelligence requirements to focus Intelligence Community collection, analysis and production to target MDA/BMDS cyber vulnerabilities, and incorporate cyber security engineering requirements into the systems engineering process.

The Security and Intelligence Project captures four specific areas:
 1) Intelligence
 2) Counterintelligence
 3) Cyber Security Engineering
 4) Research, Development Acquisition (RDA) Security

Collectively, these efforts provide critical information regarding threat ballistic missile system capabilities (via intelligence); protection of personnel, activities, and technology from espionage and terrorism through active and passive activities (via counterintelligence); and BMDS system vulnerabilities (via Cyber Security Engineering).

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
<p>1) Intelligence provides a clearing house for MDA's requirements for the Intelligence Community collection, analysis and production. Intelligence also provides for quality control and dissemination of Intelligence Community products for all properly cleared Government and contractor personnel and provides feedback to the Intelligence Community on subsequent questions, issues and other requirements resulting from Intelligence Community reporting. The intelligence process begins when the Intelligence Community collects and analyzes data on foreign threat missiles. Resulting threats and threat changes are provided to the BMDS System Engineer, who uses the threats to develop and change the BMDS. This information reduces risk and improves system performance. It enables MDA Program Managers to achieve a sufficiently accurate understanding of the threat environment to respond to relevant capabilities of immediate importance, make informed decisions, and invest limited resources on countering the most significant aspects of potential adversary capabilities. Other aspects of Intelligence are designed to gain access to, and leverage unique Intelligence Community developed, owned and operated capabilities for the benefit and advocacy of the Missile Defense Community. Numerous Intelligence Community capabilities are highly classified and require both access and expertise to exploit.</p> <p>2) Counterintelligence undertakes defensive Counterintelligence (CI) activities as part of an integrated DoD/National effort to detect and neutralize foreign intelligence collection efforts, espionage and terrorist activities directed against MDA personnel, information, facilities, and activities or against U.S. National Security.</p> <p>Pursuant to DoD Directive O-5240.02 (Counterintelligence) and other DoD CI policy issuances:</p> <ul style="list-style-type: none">-- Conduct CI Investigations: Conduct initial inquiries into reported or suspected clandestine relationships between MDA personnel and agents of a foreign power or international terrorist organizations-- Perform CI Collection: Systematically collect intelligence information via liaison relationships with U.S. and host-nation intelligence, CI and law enforcement organizations and debriefings of MDA foreign travelers-- Perform CI Analysis and Production: Produce assessments, analytical reports, threat advisories and other products to keep MDA program elements and senior leadership informed on foreign intelligence, international terrorism and foreign entity cyber threat-- Provide CI Functional Services: Conduct defensive CI activities in support of MDA SAP and RDA programs, test events, and fielding/deployment activities to protect Critical Program Information and sensitive technologies from foreign intelligence collection activities and international terrorism threats. <p>3) Cyber Security Engineering Program assists the Ballistic Missile Defense System (BMDS) to manage and deploy Cyber Security engineering requirements and solutions to fulfill DoD and Warfighter mandates, while enhancing the robustness and resilience of the cyber infrastructure. Develop and coordinate near-term and long-term engineering changes to the BMDS that advances the confidentiality, integrity, and availability and counter cyber threats posed by our adversaries. To fulfill this role, the BMDS Cyber Security Engineering program works in concert with Information Assurance Engineers, Intelligence and Counterintelligence to obtain a comprehensive picture of the overall threat and cyber security engineering at all levels of the BMDS, then influence the design by 1) identifying and developing Core Standards and Requirements to implement Defense-in-Depth within planned development cycles (Builds); 2) providing oversight, coordination and management of key technical requirements development, and policy-mandated responsibilities; 3) providing contract acquisition support to BMDS Elements ensuring cyber security is addressed throughout the procurement process and; 4) interfacing with the Intelligence Community to define cyber security threats relevant to the BMDS. To fulfill stated mission requirements, the program interfaces with relevant Cyber Security Engineering experts to assess requirements, documentation and cyber security system design.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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4) Research, Development Acquisition (RDA) Security manages the MDA Information, Industrial, Operations Security, and Defense Critical Infrastructure Protection programs to protect acquisition, test, development, and fielding of BMDS capabilities. RDA Security conducts security reviews for all Congressional, General Accountability Office (GAO), budget, Freedom of Information Act (FOIA), Public Release actions; develops and coordinates Security Classification Guides (SCGs) and resolves questions regarding security classification; manages MDA Industrial Security program to develop Contract Security Classification Specifications (DD-254s) for all MDA contracts and to resolve Foreign Ownership, Control, and Influence (FOCI) issues; and conducts Information Security (INFOSEC) program reviews for all MDA offices; and conducts security inquiries as required. RDA Security also supports program offices in assessing acquisition programs to identify critical program information (CPI), recommend security measures to protect CPI; and develop Program Protection Plans. Systems Security provides planning support for BMDS deployments by coordinating site security infrastructure requirements for deploying BMDS assets with the Combatant Commanders (COCOMs) and Services and developing and coordinating site security designs to protect critical BMDS assets. RDA Security conducts the MDA Declassification Program in compliance with Executive Order 13526 (Classified National Security Information), requiring mandatory review of 25 year-old missile defense documents to ensure classified and sensitive but unclassified information is not inadvertently released into the public domain.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
<p>Title: Intelligence</p> <p style="text-align: right;">Articles:</p> <p>Description: The Intelligence program provides expertise to develop intelligence products on threat ballistic missile system capabilities, and leverages unique intelligence community-developed, owned and operated capabilities for the benefit and advocacy of the missile defense community.</p> <p>FY 2012 Accomplishments: The Intelligence Requirements Office:</p> <ul style="list-style-type: none"> - Continued to be the single intelligence requirements integration office within MDA and its designated intermediary with the Intelligence Community and maintained a consistent dialog with the Intelligence Community to ensure they have a focused, prioritized, and complete understanding of the vast requirements for foreign intelligence necessary to build a comprehensive Ballistic Missile Defense System (BMDS). - Continued to manage the intelligence collection requirements and engaged the Intelligence Community to ensure MDA requirements were documented, validated, collected, and understood. Intelligence tasks included planning intelligence collections support for missile defense tests and documenting requirements in Intelligence Community management systems, and maintaining and updating Measurement and Signature Intelligence (MASINT), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT) requirements on advances in foreign ballistic missile technology and for all MDA events. - Continued to maintain an ongoing, persistent, focused dialog with all members of the Intelligence Community to ensure MDA intelligence requirements were viewed in proper context, received the proper priority level, and were explicitly understood by the Intelligence Community. 	<p>11.636</p> <p>0</p>	<p>13.507</p> <p>0</p>	<p>11.722</p> <p>0</p>

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
<p>- Continued to provide all levels of builders of missile defense intelligence requirements with the most up to-date and accurate intelligence, which required a detailed understanding of the BMDS developer`s and senior leadership`s particular requirements.</p> <p>- Continued to provide an encyclopedic, all-source, and all encompassing knowledge base of the foreign ballistic missile threat including development, enhancement, and population of the Secret and Top Secret/Sensitive Compartmented Information Missile Threat Portals with Intelligence Community produced finished intelligence documents. These portals have the most up-to-date current intelligence to provide immediate situational awareness, technical intelligence data to be used by the BMDS Program Elements and System Engineers, and direct linkages to the Intelligence Community to support the MDA Warfighter Support Center.</p> <p>- Fully characterized all ballistic missile threat systems from high priority countries for use by the MDA Systems Engineer, Program Managers, and Director for Test to perform modeling, simulation, and testing of the BMDS. The MDA Director for Engineering used this intelligence to build the Adversary Data Package used by all Program Elements and MDA Test as the ballistic missile threat document utilized to build and test the BMDS. The Director, MDA has offered and authorized this two year resource augmentation to National Air and Space Intelligence Center (NASIC) as bridge funding while USAF/NASIC realign resources within the MIP to accommodate these requirements.</p> <p>- Proposed, developed, and executed a cyber study. The study continued the demonstration of the effectiveness of using models and simulation to support all-source scientific and technical intelligence (S&TI) analysis of the impact of cyber threats to a U.S. tactical military network. The terms model and simulation will be interchangeable and include both hardware and software. The details of the aspects of the specific network to be addressed shall be provided by the Government.</p> <p>FY 2013 Plans: FY 2013 Intelligence Planned Program:</p> <p>The Intelligence Requirements Office will:</p> <p>- Continue to be the single intelligence requirements integration office within MDA and its designated intermediary with the Intelligence Community and maintain a consistent dialog with the Intelligence Community to ensure they have a focused, prioritized, and complete understanding of the vast requirements for foreign intelligence necessary to build a comprehensive BMDS.</p> <p>- Continue to manage the intelligence collection requirements and engage the Intelligence Community to ensure MDA requirements are documented, validated, collected, and understood. Intelligence tasks will include planning intelligence collections support for missile defense tests and documenting requirements in Intelligence Community management systems, and maintaining and updating Measurement and Signature Intelligence (MASINT), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT) requirements on advances in foreign ballistic missile technology and for all MDA events.</p>			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD28: <i>Intelligence & Security</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>- Continue to maintain an ongoing, persistent, focused dialog with all members of the Intelligence Community to ensure MDA intelligence requirements are viewed in proper context, receive the proper priority level, and are explicitly understood by the Intelligence Community.</p> <p>- Continue to provide all levels of builders of missile defense intelligence requirements with the most up to-date and accurate intelligence, which requires a detailed understanding of the BMDS developer`s and senior leadership`s particular requirements.</p> <p>- Continue to provide an encyclopedic, all-source, and all encompassing knowledge base of the foreign ballistic missile threat including development, enhancement, and population of the Secret and Top Secret/Sensitive Compartmented Information Missile Threat Portals with Intelligence Community produced finish intelligence documents. These portals have the most up-to-date current intelligence to provide immediate situational awareness, technical intelligence data to be used by the BMDS Program Elements and System Engineers, and direct linkages to the Intelligence Community to support the MDA Warfighter Support Center.</p> <p>- Fully characterize all ballistic missile threat systems from high priority countries for use by the MDA Systems Engineer, Program Managers, and Director for Test to perform modeling, simulation, and testing of the BMDS. The MDA Director for Engineering uses this intelligence to build the Adversary Data Package used by all Program Elements and MDA Test as the ballistic missile threat document utilized to build and test the BMDS. The Director, MDA has offered and authorized this two year resource augmentation to National Air and Space Intelligence Center (NASIC) as bridge funding while USAF/NASIC realign resources within the MIP to accommodate these requirements.</p> <p>FY 2014 Plans:</p> <p>-Serve as designated intelligence broker between MDA and the Intelligence Community:</p> <p>-- Maintain and communicate prioritized, specific BMDS intelligence requirements to the Intelligence Community</p> <p>-- Maintain a focused dialog with all members of the Intelligence Community to ensure understanding, urgency and context of MDA intelligence requirements</p> <p>-- Manage intelligence collection requirements, including specific requirements supporting individual ground and flight test events</p> <p>-- Maintain Measurement and Signature Intelligence (MASINT), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT) requirements on advances in foreign ballistic missile technology and for all MDA events.</p> <p>-Provide up-to-date and accurate intelligence to Missile Defense community.</p> <p>-Maintain and update MDA`s encyclopedic, all-source, and all encompassing knowledge base of foreign ballistic missile threats, including development, enhancement, and population of the Missile Threat Portals with Intelligence Community produced documents at the appropriate security classification levels.</p> <p>-Fully characterize all ballistic missile threat systems from high priority countries for use by the MDA Systems Engineer, Program Managers, and Director for Test to perform modeling, simulation, and testing of the BMDS in FY 2014.</p>				
Title: Counterintelligence		4.503	6.203	5.423

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
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<p align="right"><i>Articles:</i></p> <p>Description: The Counterintelligence effort protects personnel, activities, information and technologies from espionage and terrorism through defensive operations and activities.</p> <p>FY 2012 Accomplishments: FY 2012 Counterintelligence Planned Program:</p> <ul style="list-style-type: none"> - Served as the single point of contact with Federal, State and Local Law Enforcement and Counterintelligence Organizations fostering collaborative partnerships to identify, prevent or mitigate foreign intelligence collection activities targeting MDA personnel, facilities and activities. These partnerships prevented the loss or compromise of critical Research, Development and Acquisition (RDA) program information or sensitive Ballistic Missile Defense System (BMDS) technologies during flight tests and other RDA activities. - Deployed organic counterintelligence teams to conduct defensive counterintelligence activities in support of deployed BMDS components and other fielding initiatives under the Phased Adaptive Approach (PAA). - Procured and fielded updated technical surveillance countermeasures equipment and specialized voice and data communications analysis systems used to detect, neutralize or mitigate sophisticated foreign intelligence technical and cyber collection tradecraft and technologies used to target MDA personnel, facilities, flight test activities, classified Ballistic Missile Defense conferences and BMDS fielding and deployment activities worldwide. - Supported all MDA flight tests to detect, deter, or neutralize criminal, terrorist and foreign intelligence collection threats targeting MDA / BMDS information, technologies, personnel, facilities and activities. <p>FY 2013 Plans: FY 2013 Counterintelligence Planned Program:</p> <ul style="list-style-type: none"> - The Counterintelligence Division will continue to serve as the single point of contact with Federal, State and Local Law Enforcement and Counterintelligence Organizations. To this end, the Counterintelligence Division will continue to foster collaborative partnerships targeting foreign intelligence collection activities directed against MDA personnel, facilities and activities to prevent the loss or compromise of critical program information or critical BMDS technologies. - The Counterintelligence Division will deploy organic counterintelligence teams to conduct defensive counterintelligence activities in support of BMDS fielding initiatives under the Phased Adaptive Approach and Foreign Military Sales Programs. - The Counterintelligence Division will continue to procure and field updated secure voice and data communications systems in support of MDA flight tests, conferences and BMDS deployment initiatives under the Phased Adaptive Approach and Foreign Military Sales Program. 	0	0	0
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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>- The Counterintelligence Division will continue to support all MDA flight tests to detect, deter, or neutralize criminal, terrorist and foreign intelligence collection threats targeting MDA and BMDS technologies, personnel, facilities and activities.</p> <p>FY 2014 Plans:</p> <p>- Serve as MDA Office of Primary Responsibility with Federal, State and Local Law Enforcement and Counterintelligence (CI) Organizations for reporting and resolution of matters or incidents involving MDA personnel, information and technologies.</p> <p>-- Engage National, Combatant Command and DoD CI resources to share and obtain threat information impacting MDA personnel, facilities, information, technologies, programs and activities, worldwide.</p> <p>-- Deploy organic CI and technical teams to in support of BMDS fielding and deployment activities under the European Phased Adaptive Approach and other initiatives under Foreign Military Sales Programs.</p> <p>- Conduct CI research and provide timely, relevant and accurate threat products to keep MDA program elements and senior leadership informed of criminal, terrorist and foreign intelligence threats to MDA personnel, facilities, programs, information, and activities.</p> <p>- Execute lifecycle replacement of outdated technical surveillance countermeasures and cyber forensics gear to employ the latest technologies during conferences, flight tests and other classified activities to detect, deter and prevent the loss or compromise of classified or sensitive but unclassified information to sophisticated foreign adversary collection activities.</p> <p>- Provide on-site CI and technical support for all MDA flight tests to detect, deter, or neutralize criminal, terrorist and foreign intelligence collection threats targeting MDA and BMDS technologies, personnel, facilities and activities.</p> <p>- Conduct CI in Cyberspace activities to detect malicious and insider threat activities targeting MDA administrative and fire control networks.</p>				
<p>Title: Cyber Security Engineering Program</p> <p align="right">Articles:</p> <p>Description: Cyber Security Engineering protects the BMDS from existing and emerging cyber threats and achieves mission assurance and resiliency against a cyber attack.</p> <p>FY 2012 Accomplishments: FY 2012 Ballistic Missile Defense System (BMDS) Cyber Security Engineering Planned Program:</p> <p>- Continued to fulfill DASD Cyber identify and Information Assurance Strategy and DoD Instruction 8580.</p> <p>- Developed and coordinated near-term and long-term engineering changes to the BMDS that advance the confidentiality, integrity, and availability and counter cyber threats posed by our adversaries.</p> <p>- Continued to define Cyber Security Engineering requirements for continental U.S. (CONUS) and non-CONUS based BMDS assets consistently, comprehensively, and definitively.</p>		2.798 0	4.201 0	3.673 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD28: <i>Intelligence & Security</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012
<ul style="list-style-type: none"> - Continued to assess the Cyber security architecture to address gaps/disconnects, to enhance interoperability, and realize efficiencies across all mission systems. Define the ``As Built`` and ``To Be`` Cyber Security Engineering Concepts to support technical assessments and Cyber Security design solutions and implementation recommendations. - Developed and documented technical requirements and interfaces to execute an Integrated Cyber Security Engineering Net-centric Architectural Concept. - Continued to enhance the Cyber Security posture of the BMDS by delivering expert, responsive, Cyber Security Engineering products and services supporting the Program Managers to meet BMDS and Cyber Security Engineering needs and requirements. - Continued to assist in the sustainment of an acceptable Cyber Engineering security posture for the MDA Director, through various initiatives at each stage of the program`s lifecycle. <p>FY 2013 Plans: FY 2013 Ballistic Missile Defense System (BMDS) Cyber Security Engineering Planned Program:</p> <ul style="list-style-type: none"> - Continue to fulfill DoD Instruction 8500.2 and 8510.01 policy-mandated roles of the Information Assurance Manager and Information Assurance Officer for the overarching Ballistic Missile Defense System (BMDS). - Continue to define Information Assurance/Computer Network Defense (IA/CND) requirements for continental U.S. (CONUS) and non-CONUS based BMDS assets consistently, comprehensively and definitively. - Continue to assess the IA/CND security architecture to address gaps/disconnects, to enhance interoperability, and realize efficiencies across all mission systems. Define the ``As Built`` and ``To Be`` IA/CND Architectural Concepts to support technical assessments and IA/CND design solutions and implementation recommendations. - Develop and document technical requirements and interfaces to execute an Integrated IA/CND Net-centric Architectural Concept. - Continue to enhance the information assurance posture of the BMDS by delivering expert, responsive, relevant IA/CND products and services supporting the Program Managers to meet BMDS and IA/CND needs and requirements. - Continue to assist in the sustainment of an acceptable IA/CND security posture for the MDA Director, through various initiatives at each stage of the program`s lifecycle. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Implement the Deputy Assistant Secretary of Defense (DASD) for Cyber, Identity, and Information Assurance (CIIA) Strategy by achieving Cyberspace resiliency (being flexible, adaptable, and successful in the face of cyber degradation, loss or attack) predicated on three conditions: (1) cyber assets are trustworthy, (2) Global Information Grid (GIG)-dependent missions are prepared, and (3) GIG operations have the means to prevail. - Ensure Cyber Security is integrated into the Acquisition Process in accordance with DoD Instruction 8580. 				FY 2013
				FY 2014

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD28: <i>Intelligence & Security</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
<ul style="list-style-type: none"> - Develop and coordinate near-term and long-term engineering changes to the BMDS that advances the resiliency to cyber threats posed by our adversaries. - Define Cyber Security Engineering requirements in the BMD System Specification for continental U.S. (CONUS) and non-CONUS based BMDS assets consistently, comprehensively, and definitively. Develop the requirements and specifications for building-in cyber security up front to incremental BMDS Hardware and Software builds. These requirements are then allocated out to the Elements by the BMDS systems engineering effort. Update the BMDS Core Standards to include new Cyber-related specifications specified by the agency, the COCOMS, the DOD, and the Federal Government. - Assess the Cyber security architecture to address gaps/disconnects, to enhance interoperability, and realize efficiencies across all mission systems. Define the ``As Built`` and ``To Be`` Cyber Security Systems Engineering Concepts to support technical assessments and Cyber Security design solutions and implementation recommendations impacted by the change in requirements. Support updates to the BMDS Design Description, System Security Concept (SSC), and other planning documents to ensure cyber issues are fully considered through the BMDS and element programs. - Develop and document technical requirements and interfaces to execute an Integrated Cyber Security Engineering Net-centric Architectural Concept. - Implement the National Security Agency (NSA) Community Gold Standard to enhance the Cyber Security posture of the BMDS by delivering expert, responsive, Cyber Security Systems Engineering products and services supporting the Program Managers to meet BMDS and Cyber Security Systems Engineering needs and requirements for Enhanced Homeland Defense and Enhanced MRBM Defense. - Develop and provide a Cyber Security protection process to ensure Critical Information Assurance (IA) capabilities are engineered into the BMDS design to mitigate current and emerging cyber threats. 				FY 2012	FY 2013	FY 2014
<p>Title: Research, Development Acquisition (RDA) Security</p> <p align="right">Articles:</p> <p>Description: Research, Development and Acquisition (RDA) Security protects Ballistic Missile Defense System (BMDS) information, Critical Program Information, technologies, and deploying systems, and develops/coordinates Security Classification Guides. Prior to FY 2013, the RDA Security activity was reported in budget project MD40, Program-Wide Support.</p> <p>FY 2012 Accomplishments: N/A</p> <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> - The RDA Security Information Safeguards will continue to perform all reviews supporting Agency public release, security classification, as well are required Freedom of Information Act (FOIA) and Mandatory Declassification Reviews (MDR). Additionally, RDA Security will perform Information Security staff assistance reviews and assessments of 90 MDA programs and will coordinate required security incident reviews to identify and fix security deficiencies impacting Agency operations. 				0.000 0	12.975 0	11.343 0

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD28: <i>Intelligence & Security</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012
<p>The Industrial Security program will continue to provide security oversight for the Agency's classified contracts, drafting and coordinating DD254 ``Contract Security Classification Specification`` documents to support contracting efforts.</p> <p>- The RDA Security Systems Protection branch will continue to provide security support to Phased Adaptive Approach (PAA), as well as other directed BMDS systems deployments.</p> <p>- RDA Security will focus program protection planning on the continuing assessment of candidate critical program information (CPI) for Advanced Technology programs, notably including Standard Missile-3 (SM-3) Block IIB and High Power Directed Energy, as well as Small Business Innovative Research (SBIRS) projects to identify technologies that will transition into MDA programs. Work will also continue with Counterintelligence on Supply Chain Risk Management (SCRM) issues that could degrade the performance of BMDS systems.</p> <p>- RDA Security personnel will continue to provide dedicated on-site security and protection of BMDS resources and personnel at operational sites in Alaska, California and Colorado and with the Test Directorate to ensure 100% security protection coverage of the BMDS mission operations and test assets. During this reporting period, funding for the maintenance and update of the Argus electronic security system for the Missile Defense Integrated Operations Center will be transferred from Program Wide Support into the Intelligence & Security budget.</p> <p>- The Declassification Program requirements will continue to expand in FY 2013, as the Agency conducts declassification reviews of historical documents 25 years old and older in accordance with Executive Order 13526, Classified National Security Information. The MDA production target is projected to be in excess of 5.7 million page equivalent historical records. To support this increasing requirement, MDA will fund a project for high volume scanning of volumes of legacy hard copy documents into digital format that can then be processed, using intelligent software, to assist in identifying missile defense equities. The application of scanning and automated analytic tools will permit the Agency to meet annual declassification requirements.</p> <p>FY 2014 Plans:</p> <p>- Perform all reviews supporting Agency public release, security classification, as well as required Freedom of Information Act (FOIA) and Mandatory Declassification Reviews (MDR) to ensure sensitive BMDS information is not inadvertently released into the public domain.</p> <p>- Perform Information Security staff assistance reviews and assessments of 90 MDA programs and coordinate required security incident reviews to identify and fix security deficiencies impacting Agency operations: support continuing awareness and emphasis of security measures to protect critical BMDS technological information.</p>				FY 2013
				FY 2014

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Provide security oversight for the Agency`s classified contracts by drafting and coordinating DD254 ``Contract Security Classification Specification`` documents to support contracting efforts. Oversight helps ensure appropriate protections for BMDS sensitive information are applied within the supporting industrial base. - Provide security support to Phased Adaptive Approach (PAA) and other directed BMDS systems deployments, ensuring effective physical protection is provided to extremely low density/high demand emerging warfighter capability. - Focus program protection planning on the continuing assessment of candidate critical program information (CPI) for Advanced Technology programs and reassessment of other BMDS programs affected by technical baseline changes: ensure critical technologies embedded in Missile Defense systems are not vulnerable to compromise. - Execute an effective Supply Chain Risk Management (SCRM) program to prevent unmitigated risks from degrading the performance of components and systems across the BMDS supply chain. - Provide dedicated on-site security and protection of BMDS resources and personnel at operational sites in Alaska, California and Colorado to ensure 100% security protection coverage of the BMDS mission operations and test assets based in those regions. - Provide a combination of digitized material, automated search tools, and Declassification Specialists to identify sensitive BMDS material that qualifies for exemption from automatic declassification based on age. Declassification reviews identify equities that warrant continued protection to preserve the technological advantage of the BMDS. 			
Accomplishments/Planned Programs Subtotals	18.937	36.886	32.161

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
In support of acquiring an effective BMDS capability, this project directs various executing agents and leverages expertise in the intelligence community, counterintelligence community, and information assurance community, including the Military Services, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and industry. The executing agents utilize various contracting strategies in a flexible manner to maximize their contribution to the BMDS. Products and Services will be acquired by competitive means to the extent that is possible and practical.

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Intelligence - Analysis and Support	C/FFP	Lockheed Martin:Gaithersburg, VA	20.923	4.994		7.599	May 2013	6.557	May 2014	-		6.557	Continuing	Continuing	Continuing
Intelligence - Intelligence Applications	MIPR	SMDC:Huntsville, AL	4.315	2.155		3.259	Oct 2012	2.849	Oct 2013	-		2.849	Continuing	Continuing	Continuing
Intelligence - Intelligence Collections	MIPR	NASIC:Wright-Patterson AFB, OH	0.000	1.300		2.649	Oct 2012	2.316	Oct 2013	-		2.316	Continuing	Continuing	Continuing
Intelligence - Intelligence Watch	SS/CPAF	MDIOC-Northrop Grumman:Colorado Springs CO	11.186	2.487		0.000		0.000		-		0.000	0.000	13.673	0.000
Counterintelligence - CI Analysis and Support	C/CPFF	QinetiQ Inc:Fairfax, VA	16.905	4.503		0.000		0.000		-		0.000	0.000	21.408	0.000
Counterintelligence - CI Analysis and Support 1	MIPR	Various:Various	0.600	0.000		0.000		0.000		-		0.000	0.000	0.600	0.000
Counterintelligence - CI Analysis and Support 2	C/CPFF	Booz Allen Hamilton:McLean, VA	0.000	0.000		6.203	Apr 2013	5.423	Apr 2014	-		5.423	Continuing	Continuing	Continuing
Cyber Security Engineering Program - Cyber Threat	SS/FFP	Booz Allen Hamilton:McLean, VA	7.116	2.798		0.000		0.000		-		0.000	0.000	9.914	0.000
Cyber Security Engineering Program - Cyber Threat 1	SS/FFP	Mantech:Falls Church, VA	0.000	0.000		4.201	Jul 2013	3.673	Jul 2014	-		3.673	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Research, Development Acquisition (RDA) Security - RDA Analysis & Support	MIPR	Mantech:Falls Church, VA	0.000	0.000		5.998	Oct 2012	5.243	Oct 2013	-		5.243	Continuing	Continuing	Continuing
Research, Development Acquisition (RDA) Security - RDA Support	MIPR	Booz-Allen Hamilton:McLean, VA	0.000	0.000		6.977	Oct 2012	6.100	Oct 2013	-		6.100	Continuing	Continuing	Continuing
Subtotal			61.045	18.237		36.886		32.161		0.000		32.161			

Remarks
MDIOC - Missile Defense Integration & Operations Center; SMDC - Space & Missiles Development Center; NASIC - National Air and Space Intelligence Center

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Intelligence - Intelligence Project Management MD28	SS/FFP	Various:Various	0.449	0.700		0.000		0.000		-		0.000	0.000	1.149	0.000
Subtotal			0.449	0.700		0.000		0.000		0.000		0.000	0.000	1.149	0.000

Remarks
N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency							DATE: April 2013			
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	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	61.494	18.937	36.886	32.161	0.000	32.161				

Remarks

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
MD30: <i>BMD Information Management Systems</i>	106.012	120.313	107.744	92.488	-	92.488	97.019	94.893	105.198	91.517	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

Beginning in FY2014, Cyber Operations content will move to Program Element 0603890C Enabling, Budget Project MC30. Cyber Operations content is reported in Program Element 0603890C Enabling Programs, Budget Project MD30 prior to FY2014.

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification

The Ballistic Missile Defense (BMD) Information Management Systems Project funds the Information Technology (IT), Cyber Security, Information Assurance (IA), and telecommunications infrastructure of the Agency. Information management systems are critical to the day-to-day functions of MDA personnel to communicate (classified and unclassified) with each other, Congress, senior DoD and other U.S. government agency personnel, Combatant Commanders, North Atlantic Treaty Organization (NATO) partners, and other industry partners. Communication among these organizations facilitates the MDA mission of developing and fielding an integrated Ballistic Missile Defense System (BMDS) to defend the United States, our deployed forces, allies, and friends against all ranges of enemy ballistic missiles in all phases of flight. MDA information management systems capabilities support rigorous missile defense testing and facilitates. The development of technologies to guard against future missile threat growth. Communications are vital for missile defense to continue a viable homeland defense against rogue threats and to provide the integration required to defend deployed forces, allies, and friends against theater threats. The management systems consist of MDA secure communication networks, IT systems, data centers, operations and monitoring centers which are vital to support the strategic mission of the Agency and necessary to meet disaster recovery and continuity of operations requirements. This infrastructure is required to sustain access to the Secret Internet Protocol Router Network (SIPRNET), Non secure Internet Protocol Router Network (NIPRNET), MDA classified and unclassified networks, classified and unclassified video teleconferencing services, test and business knowledge data centers, the Defense Research Engineering Network (DREN). These mission critical functions provide for the efficient operation and safeguarding of all agency information in locations supporting MDA around the world.

This project funds IT, mission critical functions, providing for the efficient operation and safeguarding of Agency information in compliance with Department of Defense (DoD) policies and in keeping with the President's declaration on 29 May 2009, that "cyber threat is one of the most serious economic and national security challenges we face as a nation".

UNCLASSIFIED

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<p>Project MD30 was realigned into the following seven inter-agency mission critical IT services and the associated plans for FY 2013 and 2014 to align with the Federal Information Technology Shared Services Strategy.</p> <ol style="list-style-type: none"> 1. End User Support This service strategy supports end user office productivity needs and covers the licensing and sustainment of desktops, laptops, and associated hardware and software. The support also covers printing and copy services, file and directory services, user authentication, and help desk support for break-fix actions. 2. Unified Communications This service strategy supports leased communications (classified and unclassified wide area networks, metropolitan area networks, and local area networks), telecommunications (local and long distance telephone services and secure and non secure mobile and desktop telephony devices), management, engineering, systems integration, operations, maintenance, and technical support services. Unified Communications also includes sustainment of Video Teleconferencing (VTC) hardware/software, VTC and conference room scheduler application, BlackBerrys and wireless services, instant messaging and collaboration, secure and non-secure telephone equipment, private branch exchange switches maintenance, unclassified desktop/laptop integrated audio/video collaboration services, secure Telepresence suites and secure mobile cell phones. 3. Information Assurance/Computer Network Defense (IA/CND) This service strategy provides protection of classified and unclassified infrastructure necessary for planning and coordination of the Director's RDT&E, operations and maintenance, and upgrade initiatives for the BMDS. This service strategy provides compliance with Federal Information Security Management Act (FISMA) and includes implementation of the DoD Information Assurance Certification and Accreditation Process (DIACAP) to manage risk, conduct security assessments, and monitor compliance with applicable security controls. This vital program of the BMDS and MDA Enterprise consists of cyber security, information assurance, computer network defense, network situational awareness, and certification and accreditation activities to comply with the Global Information Grid Information Assurance Strategic Plan and Goals, DoD information assurance directives, instructions and guidelines. 4. Business Automation Services In accordance with the Clinger Cohen Act and Defense Business Systems Investment Management Process, the Business Automation Services strategy provides for the licensing and sustainment of DoD business enterprise architecture approved applications. This function ensures that MDA business applications meet the interoperable defense business solutions requirements for federal accounting, financial management, and reporting requirements 5. Portal and Data Services The Portal and Data Services strategy enables knowledge and information sharing across MDA. This service includes operations and maintenance of the Unclassified and Classified MDA Knowledge Online portals and associated storage. This function is also responsible for records management solutions, and privacy and civil liberties compliance and reporting. 6. Network and Infrastructure Services 		

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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This strategy includes operations and sustainment of MDA classified and unclassified networks and data centers. This service ensures DoD compliant delivery, oversight and performance monitoring of IT systems that enable, secures IT systems access, server and storage capacity management, and communications security (COMSEC) status. This service also supports Disaster Recovery and Continuity of Operations (DR/COOP) rehearsals and network hardware break/fix and end-of-life replacement.

7. Information Technology (IT) Planning and Solutions

This service strategy provides IT project planning and management, life-cycle asset management, enterprise architecture planning and documentation, architecture change and configuration management, Office of Management and Budget (OMB) and DoD IT compliance tracking and reporting.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
Title: End User Support	0.000	32.958	32.039
Articles:	0	0	0
Description: Provides for operations, maintenance and helpdesk support to each MDA IT user desktop capability.			
FY 2012 Accomplishments: N/A			
FY 2013 Plans:			
-Sustain End User core service support 18 hours a day, 6 days a week for administrative and business information systems for approximately 8,000 MDA unclassified users and approximately 3,500 classified users			
-Monitor networks for user compliance and DoD policies, and report incidents			
-Maintain Printing and Copy Services (386 multi-functional device printer s and 12 print servers)			
-Sustain email services (24 Exchange servers, 4 BlackBerry Enterprise Services servers and 2 archiving storage area networks)			
-Sustain file services (8 file servers and 4 storage area networks)			
-Maintain Directory Services (24 Active Directory and domain controller servers)			
-Maintain Authentication services (Public Key Infrastructure/Common Area Card)			
-Maintain current hardware and software licenses for IT operational systems			
-Maintain an Integrated Service Desk supporting 8,000 MDA users across all locations, resolving over 45,000 help desk tickets per quarter			
- Maintain IT life-cycle asset management of over 15,000 end user devices (desktops, laptops, monitors, printers, thin clients, and BlackBerrys)			
-Fund MDA Chief Information Office (CIO) civilian salaries			
FY 2014 Plans: Continue efforts as listed under FY 2013 plans for End User Support.			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
The change between FY 2013 and FY 2014 is due to a reduction in software license costs.				
Title: Unified Communications		0.000	16.573	15.769
		Articles: 0	0	0
Description: Provides for implementation, operations and maintenance of VTC, wireless and telephony services.				
FY 2012 Accomplishments: N/A				
FY 2013 Plans: -Fund recurring leased circuits (wide area, local area and metropolitan area networks), maintenance agreements and licenses for MDA Enterprise network and telecommunications equipment (classified and unclassified mobile and telephony devices) -Operate, monitor, and sustain recurring classified and unclassified telecommunications equipment to comply with DoD policies and Global Information Grid architecture plan -Operate, monitor, and sustain recurring classified and unclassified wireless services -Operate, monitor, and sustain recurring operations for agency wide video teleconference rooms and equipment -Provide and implement engineering solutions for all unified communication services -Sustain unclassified desktop instant messaging and collaboration capabilities to MDA users -Fund Chief Information Office (CIO) civilian salaries				
FY 2014 Plans: Continue efforts as listed under FY 2013 plans for Unified Communications. The change between FY 2013 and FY 2014 is the result of continued efficiencies in reducing leased circuits costs and through the implementation of a fee-for-service business model for IT services within the Agency.				
Title: Information Assurance/Computer Network Defense		0.000	11.314	0.000
		Articles: 0	0	0
Description: Provides for the certification of IT networks and systems, monitoring and computer emergency response services, and Cyber Security workforce training. Beginning in FY2014, Cyber Operations content will move to Program Element 0603890C Enabling, Budget Project MC30. Cyber Operations content is reported in Program Element 0603890C Enabling Programs, Budget Project MD30 prior to FY2014.				
FY 2012 Accomplishments: N/A				
FY 2013 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD30: <i>BMD Information Management Systems</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> -Monitor and defend MDA mission, test, and administrative information systems 24 hours a day, 7 days a week, 365 days a year -Collect, analyze, and report vulnerability and cyber warfare attack metrics to the MDA Chief Information Officer (CIO), MDA leadership, and U.S. Cyber Command -Ensure MDA mission, test, and administrative systems are operated securely in accordance with DoD Information Assurance Certification and Accreditation policies -Implement Information Assurance Vulnerability Assessments and Communication Tasking Orders remediation and patches -Prepare and maintain current certification and accreditation documentation for general service networks reported to DoD and Office of Management and Budget -Manage data-at-rest encryption to ensure compliance with Global Information Grid mandated policies -Revise and updated Information Assurance certification and accreditation packages for system level Ballistic Missile Defense Systems reported to DoD and Office of Management and Budget -Fund recurring hardware maintenance and software licenses for Information Assurance (IA) monitoring systems -Manage the Information Assurance Workforce Improvement Program to certify Information Assurance professionals and report compliance in accordance with Federal Information Security Management Act (FISMA) and DoD Manual 8570.1, achieving the DoD certification goal -Complete DoD mandated annual Information Assurance user training for the MDA workforce -Provide Information Assurance engineering and planning guidance and vulnerability assessment for all MDA Information Technology acquisition programs -Fund MDA Chief Information Office (CIO) civilian salaries <p>FY 2014 Plans: See PE 0603890C MC30 Cyber Operations for FY2014 Base Plans</p>				
<p>Title: Business Automation Services</p> <p align="right">Articles:</p> <p>Description: Provides for the implementation, operations and maintenance of business specific applications.</p> <p>FY 2012 Accomplishments: N/A</p> <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> -Sustain an MDA community cloud to host and sustain business applications, storage administration, hosting and operations and maintenance of the virtual environment -Sustain portal-based Learning Management System 		0.000 0	7.072 0	6.723 0

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD30: <i>BMD Information Management Systems</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>-Host and provide business applications support for Program Resource Internet Database Environment (PRIDE), Information Management Program Activity control Tool (IMPACT), Standard Procurement System (SPS), Personnel Tracking System (PTS), Human Resource Tracking System (HRTS), Computer-aided Facilities Management(CAFM)</p> <p>-Provide server administration hosting licensing and management</p> <p>-Maintain Integrated Access Control System and Diamond II badge system</p> <p>-Maintain hardware and licenses for Defense Enrollment Eligibility Reporting System (DEERS)/Real-time Automated Personnel Identification System (RAPIDS) stations for issuing DoD identification smart cards to MDA employees</p> <p>-Fund MDA Chief Information Office (CIO) civilian salaries</p> <p>FY 2014 Plans: Continue efforts as listed under FY 2013 plans for Business Automation Services.</p> <p>The change between FY 2013 and FY 2014 is due to a reduction in software license costs.</p>				
Title: Portal and Data Services		0.000	9.781	7.587
	Articles:	0	0	0
Description: Provides for the implementation, operations and maintenance of Portal, digital records and data archiving functions.				
FY 2012 Accomplishments: N/A				
FY 2013 Plans:				
<p>-Sustain the classified and unclassified MDA Knowledge On-line portal environment including data management, data storage, and data mining services providing access to over four hundred terabytes of Ballistic Missile Defense data available to 8,000 users</p> <p>-Maintain a MDA Privacy Office, conducted privacy impact surveys and completed Civil Liberties compliance reporting</p> <p>-Maintain compliance with Section 508of the Rehabilitation Act to ensure electronic information technology is accessible to persons with disabilities</p> <p>-Sustain the Ballistic Missile Defense System (BMDS) Integrated Master Schedule and the Ballistic Missile Defense (BMD) Asset Management Tool</p> <p>-Manage a software assessment program and conducted reviews of proposed software applications for DoD compliance</p> <p>-Sustain a DoD mandated Electronics Records Management system</p> <p>-Provide MDA web-based training programs for information assurance, business applications, workforce certification, security, and ethics</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD30: <i>BMD Information Management Systems</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
-Fund MDA Chief Information Office (CIO) civilian salaries				
FY 2014 Plans: Continue efforts as listed under FY 2013 plans for Portal and Data Services. The change between FY 2013 and FY 2014 is due to a reduction in software license costs and projected personnel cost savings from the award of the MDA Integrated Communications Services contract (MICS).				
Title: Network and Infrastructure Services		0.000	20.338	20.087
		Articles: 0	0	0
Description: Provides for the implementation, operations, maintenance and Communications Security (COMSEC) for the MDA UNET/CNET.				
FY 2012 Accomplishments: N/A				
FY 2013 Plans: -Sustain core communications distribution services across the MDA Enterprise consisting of two wide area networks, three metropolitan area networks, fourteen local area networks, one hundred eighty sub-networks and over five thousand network devices -Sustain two computing and data centers (Huntsville, Alabama and Colorado Springs, Colorado) across the MDA Enterprise including network operations and performance monitoring; Disaster Recovery and Continuity of Operations rehearsals; internet access management; and web filtering -Architect and develop plans to repair general IT service and business systems -Perform network tracking and analysis and reported metrics on equipment lifecycle and average time to repair -Plan, engineer and implement sustainment projects for general IT service and business systems -Procure, receive, inventory, and manage IT equipment to include network devices and desktop and laptop computers -Provide Communications Security (COMSEC) operations and maintenance services for over 4,000 COMSEC items -Fund MDA Chief Information Office (CIO) civilian salaries				
FY 2014 Plans: Continue efforts as listed under FY 2013 plans for Network and Infrastructure Services. The change between FY 2013 and FY 2014 is due to an increase in IT Engineering required to maintain compliance with Federal Laws and DoD Directives and to ensure IT network equipment is updated and current.				
Title: Information Technology (IT) Planning and Solutions		0.000	9.708	10.283
		Articles: 0	0	0

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD30: <i>BMD Information Management Systems</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				
Description: Provides IT engineering support for new requirements analysis, design, planning and implementation of IT solutions.				
FY 2012 Accomplishments: N/A				
FY 2013 Plans: -Support the MDA CIO Enterprise Architecture Board, Program Management Integration Board, and Change Control Board -Update and maintain current Enterprise architecture documentation -Provide engineering support for change management, configuration management, validation testing and quality assurance -Manage MDA customer IT requirements planning, engineering and project management -Support MDA Command Group IT project planning and documentation -Maintain asset management of IT equipment in accordance with DoD policies -Provide planning, budgeting, and management oversight of IT projects -Ensure compliance with Federal Laws and DoD policies, directives and regulations, including: Clinger-Cohen Act, the Federal Information Security Management Act, and Office of Management and Budget (OMB) IT budget reporting policies -Fund MDA Chief Information Office (CIO) civilian and matrix civilian salaries				
FY 2014 Plans: Continue efforts as listed under FY 2013 plans for Information Technology (IT) Planning and Solutions. The change between FY 2013 and FY 2014 is due to an increase in IT Engineers required to maintain Federal and DoD compliant systems and to engineer and ensure configuration control of IT network and projects.				
Title: General Information Technology (IT) Services (FY 2012)				
				Articles:
				61.182 0
				0.000 0
				0.000 0
Description: Resources fund the Information Management (IM)/Information Technology (IT), Planning, Policy, modernization, operations, and maintenance costs of the MDA General Services IT infrastructure and MDA IT users.				
FY 2012 Accomplishments: -Sustained Enterprise Network Operations Security Center (ENOSC) 24 hours a day, 7 days a week (this effort was previously reported in Cyber Security and Information Assurance) -Sustained 8 hours a day, 5 days a week Information Technology (IT) operations of Federal Office Building II in the National Capital Region and Wynn Drive facility in Huntsville, Alabama until decommissioned -Sustained IT operational services 8 hours a day, 5 days a week for administrative and business information systems -Implemented information assurance vulnerability assessment control improvements in accordance with established Plan of Action and Milestones				

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD30: <i>BMD Information Management Systems</i>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> -Monitored networks for user compliance and DoD policies, and report incidents -Funded hardware and software licenses for Information Technology (IT) operational systems (previously report in Knowledge and Information Management) -Tested and implemented software application upgrades -Maintained the network and help desk services -Provided planning, budgeting, and management oversight of IT projects -Provided web-based training to MDA users on new applications and upgrade -Monitored networks for user compliance with DoD policies and reported incidents -Maintained MDA IT system interface configuration control and asset management -Supported in/out processing operations and relocation of MDA personnel -Maintained asset accountability of IT equipment in accordance with DoD policy -Funded MDA Chief Information Office (CIO) civilian salaries <p>Defense Efficiency - As part of the Department of Defense reform agenda, reductions reported for General IT Services in FY 2012 are \$2.639 million.</p> <p>FY 2013 Plans: N/A</p> <p>FY 2014 Plans: N/A</p>						
Title: Cyber Security and Information Assurance (FY 2012)				13.779	0.000	0.000
				Articles: 0	0	0
<p>Description: This service strategy provides protection of classified and unclassified infrastructure necessary for planning and coordination of the Director`s RDT&E, operations and maintenance, and upgrade initiatives for the BMDS. This service strategy provides compliance with Federal Information Security Management Act (FISMA) and includes implementation of the DoD Information Assurance Certification and Accreditation Process (DIACAP) to manage risk, conduct security assessments, and monitor compliance with applicable security controls. This vital program of the BMDS and MDA Enterprise consists of cyber security, information assurance, computer network defense, network situational awareness, and certification and accreditation activities to comply with the Global Information Grid Information Assurance Strategic Plan and Goals, DoD information assurance directives, instructions and guidelines.</p> <p>FY 2012 Accomplishments: -Funded recurring hardware maintenance and software licenses for Information Assurance (IA) monitoring systems</p>						

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD30: <i>BMD Information Management Systems</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> -Monitored and defended MDA mission, test, and administrative information systems 24 hours a day, 7 days a week, 365 days a year -Collected, analyzed, and reported vulnerability and cyber warfare attack metrics to the MDA Chief Information Officer (CIO), MDA leadership, and U.S. Cyber Command -Revised and updated Information Assurance certification packages for administrative and business information technology systems reported to DoD and Office of Management and Budget -Ensured MDA mission, test, and administrative systems are operated securely in accordance with DoD Information Assurance Certification and Accreditation policies -Managed the Information Assurance Workforce Improvement Program to certify Information Assurance professionals and report compliance in accordance with Federal Information Security Management Act (FISMA) and DoD Manual 8570.1, achieving the DoD certification goal -Completed annual Information Assurance user training for the MDA workforce -Provided Information Assurance engineering and planning guidance and vulnerability assessment for all MDA Information Technology acquisition programs <p>FY 2013 Plans: N/A</p> <p>FY 2014 Plans: N/A</p>				
Title: Unified Communications (FY 2012)		20.101	0.000	0.000
	Articles:	0	0	0
Description: Resources fund communications for classified and unclassified voice and data circuits and services from the DISA, DISN Video Services Global, the DREN, the Defense Telecommunications Services-Washington and commercial vendors.				
FY 2012 Accomplishments:				
<ul style="list-style-type: none"> -Funded recurring leased circuits (wide area, local area and metropolitan area networks), maintenance agreements and licenses for MDA Enterprise network and telecommunications equipment (classified and unclassified mobile and telephony devices) -Operated, monitored, and sustained recurring classified and unclassified telecommunications equipment to comply with DoD policies and Global Information Grid architecture plan -Operated, monitored, and sustained recurring classified and unclassified wireless services -Operated, monitored, and sustained recurring operations for agency wide video teleconference rooms and equipment -Provided and implemented engineering solutions for all unified communication services -Funded MDA Chief Information Office (CIO) civilian salaries 				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD30: <i>BMD Information Management Systems</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>Defense Efficiency - As part of the Department of Defense reform agenda, reductions reported for Unified Communications in FY 2012 are \$2.181 million.</p> <p>FY 2013 Plans: N/A</p> <p>FY 2014 Plans: N/A</p>				
<p>Title: Knowledge and Information Management (FY 2012)</p> <p align="right">Articles:</p> <p>Description: Resources used to provide web-based engineering, operation, planning, design, application implementation, content management and training for the MDA Knowledge On-Line portal tool and support for graphics and video production to the MDA enterprise.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> -Managed MDA business applications and sustain financial and contractual support systems -Managed software assessment program and conduct reviews of proposed software applications for DoD compliance -Sustained the BMDS Integrated Master Schedule and the BMD Asset Management Tool -Conducted privacy impact surveys and support compliance reporting -Managed MDA web-based training programs for information assurance, business applications, workforce certification, security, and ethics -Sustained MDA Knowledge Online services -Funded MDA Chief Information Office (CIO) civilian salaries <p>FY 2013 Plans: N/A</p> <p>FY 2014 Plans: N/A</p>		13.433 0	0.000 0	0.000 0
<p>Title: Information Technology (IT) Sustainment Engineering (FY 2012)</p> <p align="right">Articles:</p> <p>Description: Resources are used to develop, implement, promulgate and monitor processes and IM/IT policies to ensure economical management of information resources in accordance with statutes and DoD.</p>		11.818 0	0.000 0	0.000 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
<p><i>FY 2012 Accomplishments:</i></p> <ul style="list-style-type: none"> -Sustained Information Technology (IT) services across the MDA Enterprise and maintain critical spares inventory -Architected and developed plans to repair general IT service and business systems -Performed analysis, tracked, and reported metrics on equipment lifecycle and average time to repair -Planned, engineered and implemented sustainment projects for general IT service and business systems -Revised and tested contingency plans for IT systems across the MDA enterprise -Procured, received, inventoried, and managed IT equipment to include network devices, desktop and laptop computers -Funded MDA Chief Information Officer (CIO) civilian and matrix civilian salaries <p>Defense Efficiency - As part of the Department of Defense reform agenda, reductions report for IT Sustainment Engineering for FY 2012 are \$.406 million.</p> <p><i>FY 2013 Plans:</i> N/A</p> <p><i>FY 2014 Plans:</i> N/A</p>			
Accomplishments/Planned Programs Subtotals	120.313	107.744	92.488

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603175C: <i>Ballistic Missile Defense Technology</i>	67.921	79.975	309.203		309.203	212.715	220.185	220.732	220.373	Continuing	Continuing
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	381.041	316.929	268.990		268.990	309.901	227.476	262.488	254.913	Continuing	Continuing
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,143.313	903.172	1,033.903		1,033.903	1,045.500	1,002.568	815.198	781.824	Continuing	Continuing
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	222.696	347.012	315.183		315.183	340.899	334.705	341.811	278.313	Continuing	Continuing
• 0603888C: <i>Ballistic Missile Defense Test & Targets</i>	88.162	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	88.162

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603892C: <i>AEGIS BMD</i>	1,139.019	992.407	937.056		937.056	987.729	1,074.941	880.468	876.685	Continuing	Continuing
• 0603896C: <i>Ballistic Missile Defense Command and Control, Battle Management & Communication</i>	356.900	366.552	418.355		418.355	433.470	454.452	461.991	451.947	Continuing	Continuing
• 0603898C: <i>Ballistic Missile Defense Joint Warfighter Support</i>	36.684	55.550	47.419		47.419	47.793	53.182	54.037	54.608	Continuing	Continuing
• 0603904C: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	58.970	63.043	52.131		52.131	59.893	52.005	61.751	53.511	Continuing	Continuing
• 0604880C: <i>Land Based SM-3 (LBSM3)</i>	299.012	276.338	129.374		129.374	124.547	51.927	55.808	32.938	Continuing	Continuing
• 0901598C: <i>Management HQ - MDA</i>	28.824	34.855	37.712		37.712	38.580	39.546	40.320	35.325	Continuing	Continuing

Remarks

D. Acquisition Strategy

In FY 2012, the Missile Defense Agency awarded a competitive contract for MDA Information Collaboration Services to be performed at all MDA locations.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
End User Support - End User Assistance and Advisory Services	C/CPFF	Colsa:AL, AK, CA, CO, HI, NM, VA	0.000	0.000		3.659		1.678	Oct 2013	-		1.678	Continuing	Continuing	Continuing
End User Support - End User Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay:AL, CO, NM, VA	0.000	0.000		3.140		3.863	Oct 2013	-		3.863	Continuing	Continuing	Continuing
End User Support - End User Civilian Travel	Allot	MDA Civilian Travel:AL, AK, CA, CO, HI, NM, VA	0.000	0.000		0.774		0.522	Oct 2013	-		0.522	Continuing	Continuing	Continuing
End User Support - End User IT Hardware/Software Support	C/CPAF	Northrop Grumman:AL, AK, CA, CO, HI, NM, VA	0.000	0.000		8.589		6.436	Oct 2013	-		6.436	Continuing	Continuing	Continuing
End User Support - End User IT Licenses	C/CPAF	Northrop Grumman:AL, AK, CA, CO, HI, NM, VA	0.000	0.000		5.064		4.260	Oct 2013	-		4.260	Continuing	Continuing	Continuing
End User Support - End User Operational Support	C/CPAF	Northrop Grumman:AL, AK, CA, CO, HI, NM, VA	0.000	0.000		11.732		15.280	Oct 2013	-		15.280	Continuing	Continuing	Continuing
Unified Communications - Leased Communications/Licenses	MIPR	DISA/DREN/IT2S:AL, AK, CA, CO, HI, NM, VA	0.000	0.000		9.016		6.728	Oct 2013	-		6.728	Continuing	Continuing	Continuing
Unified Communications - Unified Communications	C/CPFF	Colsa:AL, CO, VA	0.000	0.000		0.629	Oct 2012	0.304	Oct 2013	-		0.304	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Advisory and Assistance Services															
Unified Communications - Unified Communications Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay:AL, CO, VA	0.000	0.000		0.628		0.630	Oct 2013	-		0.630	Continuing	Continuing	Continuing
Unified Communications - Unified Communications Operational Support	Allot	Northrop Grumman:AL, CO, VA	0.000	0.000		0.895	Oct 2012	2.128	Oct 2013	-		2.128	Continuing	Continuing	Continuing
Unified Communications - Unified Communications VTC Operations Support	C/CPIF	TBD:AL, AK, CO, VA	0.000	0.000		5.405		5.979	Oct 2013	-		5.979	Continuing	Continuing	Continuing
Information Assurance/ Computer Network Defense - CND/IA Advisory and Assistance Services	C/CPFF	Torch Technologies:AL, CO, VA	0.000	0.000		3.143	Oct 2012	0.000		-		0.000	0.000	3.143	0.000
Information Assurance/ Computer Network Defense - CND/IA Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay:AL, CO, VA	0.000	0.000		1.727		0.000		-		0.000	0.000	1.727	0.000
Information Assurance/ Computer Network Defense - CND/IA Licenses	C/CPAF	Northrop Grumman:AL, CO, VA	0.000	0.000		0.147	Oct 2012	0.000		-		0.000	0.000	0.147	0.000
Information Assurance/ Computer Network Defense - CND/IA Operational Support	C/FFP	Northrop Grumman:AL, CO, VA	0.000	0.000		6.297	Oct 2012	0.000		-		0.000	0.000	6.297	0.000
Business Automation Services - Business Automation Advisory and Assistance Services	C/CPFF	Colsa:AL, CO, VA	0.000	0.000		0.210	Oct 2012	0.152	Oct 2013	-		0.152	Continuing	Continuing	Continuing
Business Automation Services - Business	Allot	MDA Civilian Pay:AL, CO, VA	0.000	0.000		0.471		0.473	Oct 2013	-		0.473	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Automation Civilian Pay/Travel/PCS															
Business Automation Services - Business Automation Licenses	C/CPAF	Northrop Grumman:AL, CO, VA	0.000	0.000		1.608	Oct 2012	1.021	Oct 2013	-		1.021	Continuing	Continuing	Continuing
Business Automation Services - Business Automation Operational Support	C/CPAF	Northrop Grumman:AL, CO, VA	0.000	0.000		3.759	Oct 2012	4.062	Oct 2013	-		4.062	Continuing	Continuing	Continuing
Business Automation Services - Business Automation PRIDE Support	C/CPAF	CAMBER:AL, CO, VA	0.000	0.000		1.024	Oct 2012	0.995	Oct 2013	-		0.995	Continuing	Continuing	Continuing
Business Automation Services - Business Automation Services (FY2013) Business Automation Support	MIPR	CACI:AL, CO, VA	0.000	0.000		0.000		0.020	Oct 2013	-		0.020	Continuing	Continuing	Continuing
Portal and Data Services - Portal and Data Services Advisory and Assistance Services	C/CPFF	Colsa:AL, CO, VA	0.000	0.000		0.419		0.462	Oct 2013	-		0.462	Continuing	Continuing	Continuing
Portal and Data Services - Portal and Data Services Civilian Pay/Travel/PCS	Allot	MDS Civilian Pay:AL, CO, VA	0.000	0.000		0.628		0.630	Oct 2013	-		0.630	Continuing	Continuing	Continuing
Portal and Data Services - Portal and Data Services Licenses and Maintenance	C/CPAF	Northrop Grumman:AL, CO, VA	0.000	0.000		2.410	Oct 2012	1.516	Oct 2013	-		1.516	Continuing	Continuing	Continuing
Portal and Data Services - Portal and Data Services Operational	C/CPAF	Online Subscriptions Services:AL, CO, VA	0.000	0.000		0.000		0.240	Oct 2013	-		0.240	Continuing	Continuing	Continuing
Portal and Data Services - Portal and Data Services Operational Support	C/FFP	TBD :AL, CO, VA	0.000	0.000		6.324	Nov 2012	4.739	Oct 2013	-		4.739	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Network and Infrastructure Services - Network and Infrastructure Services Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay:AL, CO, VA	0.000	0.000		2.355		2.363	Oct 2013	-		2.363	Continuing	Continuing	Continuing
Network and Infrastructure Services - Network and Infrastructure Services Advisory and Assistance Services	C/CPFF	Colsa:AL, CO, VA	0.000	0.000		0.838	Sep 2013	0.912	Oct 2013	-		0.912	Continuing	Continuing	Continuing
Network and Infrastructure Services - Network and Infrastructure Services Licenses	C/CPAF	Northrop Grumman:AL, CO, VA	0.000	0.000		8.732	Feb 2013	6.561	Oct 2013	-		6.561	Continuing	Continuing	Continuing
Network and Infrastructure Services - Network and Infrastructure Services Operational Support	C/CPAF	Northrop Grumman:AL, CO, VA	0.000	0.000		8.413	Feb 2013	10.251	Oct 2013	-		10.251	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions - IT Planning and Solutions Advisory and Assistance Services	C/CPFF	Colsa:AL, CO, VA	0.000	0.000		0.419	Sep 2013	1.140	Oct 2013	-		1.140	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions - IT Planning and Solutions Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay:AL, CO, VA	0.000	0.000		1.329		1.103	Oct 2013	-		1.103	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions - IT Planning and Solutions IT Asset Management	C/CPAF	Northrop Grumman:AL, CO, VA	0.000	0.000		3.200	Feb 2013	2.482	Oct 2013	-		2.482	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions - IT Planning and Solutions OMB,OSD, and DOD Compliance Monitoring	C/CPFF	Colsa:AL, CO, VA	0.000	0.000		0.133	Sep 2013	0.365	Oct 2013	-		0.365	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
and Reporting/Contract Deliverable															
Information Technology (IT) Planning and Solutions - IT Planning and Solutions Operational Support	C/CPAF	Northrop Grumman:AL, CO, VA	0.000	0.000		4.117	Feb 2013	2.160	Oct 2013	-		2.160	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions - MDA Agency Business Operations	Allot	MDA Business Operations:AL, CO, VA	0.000	0.000		0.510		3.033	Oct 2013	-		3.033	Continuing	Continuing	Continuing
General Information Technology (IT) Services (FY 2012) - Civilian Travel/PCS	Allot	MDA Civilian Travel:AL, CO, VA	0.890	0.817		0.000		0.000		-		0.000	0.000	1.707	0.000
General Information Technology (IT) Services (FY 2012) - Contract Management Oversight	TBD	Various:AL, AK, CA, CO, HI, NM, VA	9.956	0.000		0.000		0.000		-		0.000	0.000	9.956	0.000
General Information Technology (IT) Services (FY 2012) - General IT Advisory and Assistance Services	C/CPFF	Colsa:Various MDA Locations	0.000	1.817		0.000		0.000		-		0.000	0.000	1.817	0.000
General Information Technology (IT) Services (FY 2012) - General IT Advisory/Assistance Services	C/CPFF	General Dynamics IT:Various MDA Locations	1.574	0.000		0.000		0.000		-		0.000	0.000	1.574	0.000
General Information Technology (IT) Services (FY 2012) - IT Hardware/Software Licenses and Maintenance	C/FP	Various:AL, AK, CA, CO, HI, NM, VA	13.278	14.563		0.000		0.000		-		0.000	0.000	27.841	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
General Information Technology (IT) Services (FY 2012) - IT Management Support/ Portfolio/CRMs	C/CPAF	Northrop Grumman:AL, AK, CA, CO, HI, NM, VA	0.000	2.101		0.000		0.000		-		0.000	0.000	2.101	0.000
General Information Technology (IT) Services (FY 2012) - IT Operations	C/CPAF	Northrop Grumman:AL, AK, CA, CO, HI, NM, VA	32.139	35.830		0.000		0.000		-		0.000	0.000	67.969	0.000
General Information Technology (IT) Services (FY 2012) - MDA CIO General IT Services Civilian Pay	Allot	MDA Civilian Pay:AL, AK, CA, CO, HI, NM, VA	2.830	6.054		0.000		0.000		-		0.000	0.000	8.884	0.000
Cyber Security and Information Assurance (FY 2012) - COMSEC	C/CPAF	Northrop Grumman:AL, CO, VA	0.647	0.319		0.000		0.000		-		0.000	0.000	0.966	0.000
Cyber Security and Information Assurance (FY 2012) - DEERS/RAPIDS/ Active Client/Card Support	MIPR	Various:AL, CO, VA	0.080	0.090		0.000		0.000		-		0.000	0.000	0.170	0.000
Cyber Security and Information Assurance (FY 2012) - DIACAP Certification and Accreditation Support	C/CPFF	General Dynamics IT:AL, CO, VA	0.632	0.000		0.000		0.000		-		0.000	0.000	0.632	0.000
Cyber Security and Information Assurance (FY 2012) - DIACAP Certification/Accreditation Support	C/CPFF	Torch:AL, CO, VA	0.388	1.385		0.000		0.000		-		0.000	0.000	1.773	0.000
Cyber Security and Information Assurance (FY 2012) - IAVA Operations and Support	C/CPAF	Northrop Grumman:AL, CO, VA	2.247	2.573		0.000		0.000		-		0.000	0.000	4.820	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Cyber Security and Information Assurance (FY 2012) - Identify Protection Support	C/CPAF	WHS:AL, CO, VA	0.170	0.179		0.000		0.000		-		0.000	0.000	0.349	0.000
Cyber Security and Information Assurance (FY 2012) - Information Assurance Advisory and Assistance Services	C/CPFF	Torch:Various MDA Locations	0.388	3.343		0.000		0.000		-		0.000	0.000	3.731	0.000
Cyber Security and Information Assurance (FY 2012) - Information Assurance Advisory/ Assistance Services	C/CPFF	General Dynamics IT:Various MDA Locations	0.609	0.000		0.000		0.000		-		0.000	0.000	0.609	0.000
Cyber Security and Information Assurance (FY 2012) - Information Assurance ENOSC (Moved to General IT Services for FY 2012)	C/CPAF	Northrop Grumman:AL, CO, VA	2.272	0.000		0.000		0.000		-		0.000	0.000	2.272	0.000
Cyber Security and Information Assurance (FY 2012) - MDA CIO Information Assurance Civilian Pay	Allot	MDA Civilian Pay:AL, CO, VA	0.000	3.119		0.000		0.000		-		0.000	0.000	3.119	0.000
Cyber Security and Information Assurance (FY 2012) - MDA Information Assurance Certification	C/CPAF	Northrop Grumman:AL, CO, VA	1.669	2.771		0.000		0.000		-		0.000	0.000	4.440	0.000
Unified Communications (FY 2012) - Leased Communications - LAN/ WAN	MIPR	DISA/DREN:AL, CO, VA	4.154	4.110		0.000		0.000		-		0.000	0.000	8.264	0.000
Unified Communications (FY 2012) - Leased	C/FP	Various:AL, CO, VA	4.906	5.971		0.000		0.000		-		0.000	0.000	10.877	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Telecom/Wireless/Local/Long Distance															
Unified Communications (FY 2012) - MDA CIO Unified Communications Civilian Pay	Allot	MDA Civilian Pay:AL, CO, VA	0.000	1.284		0.000		0.000		-		0.000	0.000	1.284	0.000
Unified Communications (FY 2012) - Unified Communications Advisory and Assistance Services	C/CPFF	Colsa:Various MDA Locations	0.000	0.552		0.000		0.000		-		0.000	0.000	0.552	0.000
Unified Communications (FY 2012) - Unified Communications Advisory/ Assistance Services	C/CPFF	General Dynamics IT:Various MDA Locations	0.609	0.000		0.000		0.000		-		0.000	0.000	0.609	0.000
Unified Communications (FY 2012) - Unified Communications VTC Operations	C/CPIF	TBD:TBD	0.000	7.194		0.000		0.000		-		0.000	0.000	7.194	0.000
Unified Communications (FY 2012) - VTC Operations	C/CPFF	Microtech:Various MDA Locations	5.604	0.000		0.000		0.000		-		0.000	0.000	5.604	0.000
Unified Communications (FY 2012) - WAN Engineering Sustainment Support	C/CPAF	Northrop Grumman:AL, CO, VA	0.845	0.990		0.000		0.000		-		0.000	0.000	1.835	0.000
Knowledge and Information Management (FY 2012) - Classified MDA Knowledge Online O&M Support	C/CPAF	Northrop Grumman:AL, CO, VA	0.338	1.968		0.000		0.000		-		0.000	0.000	2.306	0.000
Knowledge and Information Management (FY 2012) - Decision Support System	C/CPAF	IBM:AL	0.425	0.000		0.000		0.000		-		0.000	0.000	0.425	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Knowledge and Information Management (FY 2012) - Knowledge Mgt Advisory and Assistance Services	C/CPAF	General Dynamics IT:AL, CO, VA	0.520	0.000		0.000		0.000		-		0.000	0.000	0.520	0.000
Knowledge and Information Management (FY 2012) - Knowledge and Information Software Licenses	C/CPAF	Northrop Grumman:AL, CO, VA	3.104	1.920		0.000		0.000		-		0.000	0.000	5.024	0.000
Knowledge and Information Management (FY 2012) - MDA CIO Knowledge and Information Management Civilian Pay	Allot	MDA Civilian Pay:AL, CO, VA	0.000	1.100		0.000		0.000		-		0.000	0.000	1.100	0.000
Knowledge and Information Management (FY 2012) - PRIDE Application Support	C/CPFF	CAMBER:AL, CO, VA	1.360	1.128		0.000		0.000		-		0.000	0.000	2.488	0.000
Knowledge and Information Management (FY 2012) - Standard Procurement System Support	MIPR	SPS JPMO:AL, CO, VA	0.019	0.424		0.000		0.000		-		0.000	0.000	0.443	0.000
Knowledge and Information Management (FY 2012) - Unclassified MDA Knowledge Online O&M Support	C/CPAF	PHACIL:AL, CO, VA	5.697	6.893		0.000		0.000		-		0.000	0.000	12.590	0.000
Information Technology (IT) Sustainment Engineering (FY 2012) - CIO Admin Support	C/CPFF	Alatec:AL, CO, VA	0.136	0.000		0.000		0.000		-		0.000	0.000	0.136	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Information Technology (IT) Sustainment Engineering (FY 2012) - CIO HR Support	C/CPFF	Peopletec:AL, CO, VA	0.124	0.000		0.000		0.000		-		0.000	0.000	0.124	0.000
Information Technology (IT) Sustainment Engineering (FY 2012) - Contract Deliverables and OMB, OSD, DoD Compliance Monitoring Reporting	C/CPFF	Colsa:Various MDA Locations	0.246	3.637		0.000		0.000		-		0.000	0.000	3.883	0.000
Information Technology (IT) Sustainment Engineering (FY 2012) - Contract Deliverables/ OMB, OSD, DoD Compliance Monitoring Reporting	C/CPFF	General Dynamics IT:Various MDA Locations	1.539	0.000		0.000		0.000		-		0.000	0.000	1.539	0.000
Information Technology (IT) Sustainment Engineering (FY 2012) - IT Recapitalization/ Consumables	C/CPAF	Northrop Grumman:AL, CO, VA	4.317	3.736		0.000		0.000		-		0.000	0.000	8.053	0.000
Information Technology (IT) Sustainment Engineering (FY 2012) - IT Sustainment Engineering Advisory and Assistance Services	C/CPFF	General Dynamics IT:AL, CO, VA	0.342	0.249		0.000		0.000		-		0.000	0.000	0.591	0.000
Information Technology (IT) Sustainment Engineering (FY 2012) - Implementation/ Architectural Engineering Support	C/CPAF	Northrop Grumman:AL, CO, VA	1.958	2.178		0.000		0.000		-		0.000	0.000	4.136	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Information Technology (IT) Sustainment Engineering (FY 2012) - MDA CIO IT Sustainment Engineering Civilian Pay	Allot	MDA Civilian Pay:AL, CO, VA	0.000	2.018		0.000		0.000		-		0.000	0.000	2.018	0.000
Subtotal			106.012	120.313		107.744		92.488		0.000		92.488			

Remarks
The decrease from FY 2012 to FY 2013 reflects adjustments required to meet Agency priorities.

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	106.012	120.313	107.744	92.488	0.000	92.488			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency							DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>			PROJECT MD30: <i>BMD Information Management Systems</i>			
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks N/A									
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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - FY 2012	✦	✦	✦	✦																								
Sustain the Information Technology Infrastructure Across the MDA Enterprise - FY 2012	✦	✦	✦	✦																								
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - FY 2012	✦	✦	✦	✦																								
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - FY 2012	✦	✦	✦	✦																								
Complete Annual Information Assurance User Training for MDA Workforce - FY 2012	✦	✦	✦	✦																								
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - FY12	✦	✦	✦	✦																								
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - FY 2012	✦	✦	✦	✦																								
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - FY 2012	✦	✦	✦	✦																								
Revise and Test Contingency Plans for Information Technology Systems - FY 2012	✦	✦	✦	✦																								
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - FY2012	✦	✦	✦	✦																								
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - FY 2012	✦	✦	✦	✦																								
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - FY 2012	✦	✦	✦	✦																								

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity +
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity +

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - FY 2012	+	+	+	+																								
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - FY 2012	+	+	+	+																								
Procure, Implement, and Asset Control for Information Technology Operational Systems - FY 2012	+	+	+	+																								
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - FY 2012	+	+	+	+																								
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2012	+	+	+	+																								
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - FY 2012	+	+	+	+																								
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - FY 2012	+	+	+	+																								
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance					◆	◆	◆	◆																				
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs					◆	◆	◆	◆																				
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance					◆	◆	◆	◆																				
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems					◆	◆	◆	◆																				

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>
PROJECT MD30: <i>BMD Information Management Systems</i>	

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity +
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity +

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete Annual Information Assurance User Training for MDA Workforce					◆	◆	◆	◆																				
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services					◆	◆	◆	◆																				
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command					◆	◆	◆	◆																				
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Revise and Test Contingency Plans for Information Technology Systems					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Sustain the Information Technology Infrastructure Across the MDA Enterprise					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle					◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Significant Event Complete	Milestone Decision Complete	Element Test Complete	System Level Test Complete	Complete Activity
Significant Event Planned	Milestone Decision Planned	Element Test Planned	System Level Test Planned	Planned Activity

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Procure, Implement, and Asset Control for Information Technology Operational Systems																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - FY 2012	1	2012	4	2012
Sustain the Information Technology Infrastructure Across the MDA Enterprise - FY 2012	1	2012	4	2012
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - FY 2012	1	2012	4	2012
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - FY 2012	1	2012	4	2012
Complete Annual Information Assurance User Training for MDA Workforce - FY 2012	1	2012	4	2012
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - FY12	1	2012	4	2012
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - FY 2012	1	2012	4	2012
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - FY 2012	1	2012	4	2012
Revise and Test Contingency Plans for Information Technology Systems - FY 2012	1	2012	4	2012
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - FY2012	1	2012	4	2012
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - FY 2012	1	2012	4	2012
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - FY 2012	1	2012	4	2012
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - FY 2012	1	2012	4	2012
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - FY 2012	1	2012	4	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Procure, Implement, and Asset Control for Information Technology Operational Systems - FY 2012	1	2012	4	2012
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - FY 2012	1	2012	4	2012
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2012	1	2012	4	2012
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - FY 2012	1	2012	4	2012
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - FY 2012	1	2012	4	2012
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance	1	2013	4	2013
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs	1	2013	4	2013
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance	1	2013	4	2013
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems	1	2013	4	2013
Complete Annual Information Assurance User Training for MDA Workforce	1	2013	4	2013
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services	1	2013	4	2013
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command	1	2013	4	2013
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems	1	2013	4	2018
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications	1	2013	4	2018
Revise and Test Contingency Plans for Information Technology Systems	1	2013	4	2018

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services	1	2013	4	2018
Sustain the Information Technology Infrastructure Across the MDA Enterprise	1	2013	4	2018
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week	1	2013	4	2018
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce	1	2013	4	2018
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise	1	2013	4	2018
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications	1	2013	4	2018
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool	1	2013	4	2018
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle	1	2013	4	2018
Procure, Implement, and Asset Control for Information Technology Operational Systems	1	2013	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MC30: <i>Cyber Operations</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
MC30: <i>Cyber Operations</i>	-	0.000	0.000	17.443	-	17.443	16.355	16.567	18.445	17.415	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

Beginning in FY2014, Cyber Operations content will move to this Program Element 0603890C Enabling, Budget Project MC30. Cyber Operations content is reported in Program Element 0603890C Enabling Programs, Budget Project MD30 Information Assurance/Computer Network Defense prior to FY2014.

A. Mission Description and Budget Item Justification

The Cyber Operations budget project in the Enabling Program Element is executed by the MDA Chief Information Officer who is the Agency Designated Approving Authority (DAA) for MDA Administrative information technology systems. The project provides funds to sustain MDA DoD Information Assurance Certification and Accreditation Program (DIACAP) and Controls Validation Testing (CVT) activities, analysis of validation results, risk assessments and reviews of proposed Program Manager/Information Assurance Manager (PM/IAM) Plan of Action and Milestones (POA&Ms) for the MDA mission, test and administrative systems. It maintains the Certification & Accreditation (C&A) data repository, capturing the DIACAP documentation (artifacts, validation results, and Information Assurance Risk Assessment results, and Designated Approving Authority (DAA) accreditation decisions) and POA&M on all MDA information systems. It supports the monitoring and tracking of Cybersecurity mitigations detailed in IT security POA&Ms. Activities include preparation of C&A documentation and accreditation recommendations to the MDA Senior Information Assurance Officer (SIAO)/Certification Authority (CA) and DAA. Independent Verification and Validation (IV&V) team actions ensure the availability, integrity, authentication, confidentiality and non-repudiation of the MDA mission, test and administrative systems. Activities in the Project are necessary to comply with the Federal Information Security Management Act (FISMA).

This project funds the MDA Security Operations Center (SOC), responsible for monitoring, managing, patching, and maintaining MDA network and core IT services; issuing and tracking Technical Compliance Orders; and coordinating overarching Enterprise NetOps. The SOC provides the network security operations centers and supporting processes to protect and defend Ballistic Missile Defense System (BMDS) and the MDA Enterprise information and information systems.

The MDA Computer Emergency Response Team (CERT), funded in this project, monitors the classified and unclassified information technology MDA administrative IT networks and report vulnerabilities. The MDA CERT coordinates with U.S. Cyber Command to identify and implement network vulnerability updates and patches to comply with U.S. Cyber Command vulnerabilities identified for DoD networks.

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MC30: <i>Cyber Operations</i>
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The project funds IA governance management and administrative management support, annual Agency-wide computer-based IA training and metrics reporting, implementation of Public Key Infrastructure and Enabling and Communications Security (COMSEC) related activities.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
<p>Title: Information Assurance/Computer Network Defense (IA/CND)</p> <p align="right">Articles:</p> <p>Description: Provides for the certification of Information Technology networks and systems, monitoring and computer emergency response services.</p> <p>FY 2012 Accomplishments: See PE 0603890C Project MD30 for FY12 accomplishments</p> <p>FY 2013 Plans: See PE 0603890C Project MD30 for FY13 plans</p> <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> -Monitor and defend MDA mission, test, and administrative information systems 24 hours a day, 7 days a week, 365 days a year -Collect, analyze, and report vulnerability and cyber warfare attack metrics to the MDA Chief Information Officer (CIO), MDA leadership, and U.S. Cyber Command -Ensure MDA mission, test, and administrative systems are operated securely in accordance with DoD Information Assurance Certification and Accreditation policies -Implement Information Assurance Vulnerability Assessments and Communication Tasking Orders remediation and patches -Prepare and maintain current certification and accreditation documentation for general service networks reported to DoD and Office of Management and Budget -Manage data-at-rest encryption to ensure compliance with Global Information Grid mandated policies -Revise and updated Information Assurance certification and accreditation packages for system level Ballistic Missile Defense Systems reported to DoD and Office of Management and Budget -Fund recurring hardware maintenance and software licenses for Information Assurance (IA) monitoring systems -Manage the Information Assurance Workforce Improvement Program to certify Information Assurance professionals and report compliance in accordance with Federal Information Security Management Act (FISMA) and Information Assurance Workforce Improvement Program (DoD Manual 8570.1), achieving the DoD certification goal -Complete DoD mandated annual Information Assurance user training for the MDA workforce 	<p>0.000</p> <p>0</p>	<p>0.000</p> <p>0</p>	<p>17.443</p> <p>0</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MC30: <i>Cyber Operations</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013
-Provide Information Assurance engineering and planning guidance and vulnerability assessment for all MDA Information Technology acquisition programs -Fund MDA Chief Information Office (CIO) civilian salaries				
Accomplishments/Planned Programs Subtotals			0.000	0.000
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				
E. Performance Metrics N/A				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MC30: <i>Cyber Operations</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Information Assurance/Computer Network Defense (IA/CND) - BMDs IA Advisory and Assistance Services	C/CPFF	Booz Allen Hamilton:AL, CO, VA	0.000	0.000		0.000		1.260	Oct 2013	-		1.260	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (IA/CND) - CND/IA Advisory and Assistance Services	C/CPFF	Torch Technologies:AL, CO, VA	0.000	0.000		0.000		2.737	Oct 2013	-		2.737	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (IA/CND) - CND/IA Civilian pay/Travel/PCS	Allot	MDA Civilian Pay:AL, CO, VA	0.000	0.000		0.000		2.048		-		2.048	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (IA/CND) - CND/IA Comsec	MIPR	NSA:AL, CO, VA	0.000	0.000		0.000		0.104	Oct 2013	-		0.104	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (IA/CND) - CND/IA Licenses	C/FFP	Northrop Grumman:AL, CO, VA	0.000	0.000		0.000		3.944	Oct 2013	-		3.944	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (IA/CND) - CND/IA Operational Support	C/FFP	Northrop Grumman:AL, CO, VA	0.000	0.000		0.000		7.350	Oct 2013	-		7.350	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		17.443		0.000		17.443			

Remarks
N/A

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	0.000	17.443	0.000	17.443			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency							DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>			PROJECT MC30: <i>Cyber Operations</i>				
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MC30: <i>Cyber Operations</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command									✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance									✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs									✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services									✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems									✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦
Complete Annual Information Assurance user Training for MDA Workforce									✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦
Procure, Implement, and Asset Control of Hardware maintenance and Software Licenses for Monitoring Systems of Information Assurance									✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦	✦

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MC30: <i>Cyber Operations</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command	1	2014	4	2018
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance	1	2014	4	2018
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs	1	2014	4	2018
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services	1	2014	4	2018
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems	1	2014	4	2018
Complete Annual Information Assurance user Training for MDA Workforce	1	2014	4	2018
Procure, Implement, and Asset Control of Hardware maintenance and Software Licenses for Monitoring Systems of Information Assurance	1	2014	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
MD31: <i>Modeling & Simulation</i>	176.406	50.181	46.608	41.223	-	41.223	32.667	45.358	47.073	51.083	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification

The mission of MDA's Modeling and Simulation (M&S) Program is 1) to execute a single, integrated, and synchronized program to manage M&S development in support of MDA's BMDS acquisition, 2) to establish, maintain, and refine system M&S data elements and parameters to verify and validate the BMDS M&S domain, and 3) to drive MDA test activities to collect data for use in anchoring M&S.

M&S develops, sustains and delivers system-level models, frameworks, and simulations which are used to examine and evaluate BMDS performance and behaviors of the associated components and elements within a virtual simulation environment. MDA's M&S Program assists the development and acquisition of the BMDS by providing: M&S system and product planning, development, integration, and operation; threat model verification and analysis; and integration and deployment of the Agency's Distributed BMDS Real-Time Hardware-in-the-Loop (HWIL) and digital M&S simulation capabilities as a single, integrated, and synchronized program.

Interdependencies: MDA's M&S program is essential to ensuring missile defense capabilities are affordable and effective. Through the use of verified and validated models and accredited simulation systems, the MDA's M&S program provides a cost effective means to prove and explore the performance space of the BMDS beyond what can be physically tested under current test range conditions. This program enables the concept exploration and functional analyses used to assess BMDS capabilities. Through conceptual simulation activities, M&S provides the capability to design and develop technologies to hedge against future missile threats. These efforts require close coordination with the Operational Test Agencies (OTAs), MDA Program Elements, Combatant Commands (COCOMs), DoD, Joint Staff, and Military Services.

In response to the 2008 Director of Operational Test and Evaluation (DOT&E) BMDS Assessment Report, M&S has developed and is executing Corrective Action Plans. Key tasks include:

- Predicting system performance based on the use of verified and validated models and simulations.
- Performing System Post-Flight Reconstructions (SPFRs) to assess the accuracy of predicted data and confirm BMDS system performance while also further refining and validating BMDS models and simulations.
- Developing refined M&S accreditation criteria between MDA and Operational Test Agency (OTA).

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
<p>- Assessing the Verification and Validation (V&V) status of threat system models, sensor models, interceptor and lethality models.</p> <p>- Awarding a competitive (Full and Open Competition) development contract for an integrated, composable open M&S Framework (Objective Simulation Framework (OSF) to resolve integration challenges across the breadth of the BMDS M&S enterprise.</p> <p>The M&S objective is to evolve the various systems and products to incrementally improve the fidelity of the Agency`s M&S representations to match, as appropriate, the real world performance of the BMDS and meet Warfighter and Agency needs. In particular, MDA`s M&S systems and products provide analysis and decision-making and planning capabilities for Real-World Operations in support of the National Command Authority, Joint Staff, Military Services, North Atlantic Treaty Organization (NATO), Combatant Commands, OTAs, Director of Operational Test & Evaluation (DOT&E), and Allies. Models and simulations are tailored to the specific needs of the Agency`s test events and to match BMDS components in their various stages of development, ranging from low-to-medium fidelity analyses supporting concept definitions studies, to high-fidelity models used to support engineering level activities.</p> <p>Execution of the M&S mission requires reliance on and operation of two simulation frameworks which, when combined to meet specific M&S use case and user requirements with the appropriate fidelity, form a single Objective Simulation Framework (OSF) to enable the simulation of the BMDS performance in a virtual environment. The BMDS M&S system is evolving into a fully integrated End-to-End system for all M&S uses and venues. The final integrated system will merge the Single Stimulation Framework (SSF) and Digital Simulation Architecture (DSA) into one seamless M&S system that will meet both real-time and non-real time simulation needs. This combined framework, called the Objective Simulation Framework (OSF), will host all simulated activities, events, scenarios, and Element and Threat models. MDA will use the end-to-end M&S System to conduct BMDS ground tests, Performance Assessments (PAs), Technical Assessments (TAs), component training, Wargames, Flight Tests analysis, Threat Analysis, International Event Simulations, and to support COCOM exercises.</p> <p>The Core Truth Modeling program provides consistent and common Phenomenology, Lethality, Environment, and Threat capabilities for Agency M&S venues. Phenomenology models address missile hard body optical and infrared signatures, as well as the plume produced by the missile engines. Lethality models represent the impact of the BMDS missile kill vehicle (KV) (i.e. Ground-Based Interceptor, Standard Missile-3 (SM-3), Terminal High Altitude Area Defense (THAAD)) on reentry vehicles (RVs). Lethality results include percentage of destruction and direction and speed of debris fragments. Environment modeling provides a representation of natural and man-made endo and exo-atmospheric conditions (e.g., rain, wind, sea state) for simulations. The common threat engineering capability produces adversary trajectory and signature data to enable design, verification, and assessment of the BMDS and associated Components concepts and requirements. Common threat data is used in various BMDS simulation events (e.g., flight, ground, performance assessment, warfighter training/exercises) to prove the performance of the BMDS. These threat representations are derived from the Adversary Capability Document (ACD) and Adversary Data Packages (ADP).</p> <p>MDA`s M&S capabilities, systems and products are in use throughout the BMDS and provide the Warfighter and Operational Test Agencies (OTAs) the capability to evaluate both the BMDS and individual components. MDA works to validate and accredit system-level models and simulations by anchoring them to ground and flight test events to support accurate and comprehensive assessments of the BMDS. The success of the missile defense program is enabled by quality M&S systems and products that help to demonstrate how BMDS technologies work. In particular, MDA M&S System and Product testing is based on an integrated, comprehensive, and phased test program as outlined in MDA`s Integrated Master Test Plan (IMTP). Within the construct of the IMTP, MDA Element unique M&S systems, subsystems, and components are tested as part of their respective development and integration, a necessary precursor to conducting BMD System-level M&S testing (e.g., integrated</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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ground test, performance/technical assessment venues). Resources for the planning, design, execution and management of this testing are provided in accordance with the BMDS Test Policy, as listed in the most current version of the IMTP.

The MDA M&S program also supports various Allied/Coalition Partner cooperative activities, and various real-world pre- and post-flight launch analyses, and the Israel Cooperative Programs.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
<p>Title: Modeling and Simulation (M&S) Requirements, Design Spt, Scenario Optimization</p> <p align="right">Articles:</p> <p>Description: Modeling and Simulation (M&S) capability development executes an integrated, synchronized program to manage M&S development in support Ballistic Missile Defense System (BMDS) acquisition, providing system-level models and simulations for accurate and comprehensive BMDS performance assessments.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Developed and published the Modeling and Simulations (M&S) Capability Planning Specification (CPS), System/Subsystem Specification (SSS), and System Interface Control Documents (ICD) for the Digital Simulation Architecture (DSA) Framework; and Single Stimulation Framework (SSF) build 1.1.6, and the Multi-Use Simulation Tool (MUST). - Verified and adjudicated stakeholder Modeling and Simulation need statements, capability statements, and capability packages for Epoch testing and assessment in Performance Assessments (PAs), Ground Test Campaigns, and COCOM exercises. - Provided updates and expanded the over 170 model capability descriptions in the Missile Defense Agency's Modeling and Simulation catalog. - Executed traceability between the Modeling and Simulation requirements database and product development via the above mentioned specifications. - Utilized system engineering processes to produce capability planning and performance specifications in support of Modeling and Simulation product development to enable Missile Defense Agency ground tests, training events, BMDS exercises, BMDS wargames, BMDS Performance Assessments (PAs), and Missile Defense Agency element integration. - Supported the update and publishing of the Agency's Integrated Master Test Plan (IMTP). - Provided export-authorized M&S software to nations or international organizations. - Supported Technical Interchange Meetings (TIMs) and the Bilateral Activities via Secure Interactive Link (BASIL) Project Arrangement with the United Kingdom (UK). <p>FY 2013 Plans:</p> <p>Development:</p> <ul style="list-style-type: none"> - Continue implementation of the final Transition Plan for retirement of the Digital Simulation Architecture (DSA) and Single Stimulation Framework (SSF) frameworks, and assess readiness for a phased Objective Simulation Framework (OSF) introduction into M&S venues. 	<p>6.815</p> <p>0</p>	<p>8.612</p> <p>0</p>	<p>7.617</p> <p>0</p>

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Deploy Build 1 of the Objective Simulation Framework (OSF) to support all M&S Use Cases. - Provide integrated Verification, Validation & Accreditation (VV&A) of MDA M&S at the system level for specific events, to include Technical Assessment, Performance Assessment, Ground Tests that support BMDS fielding decisions, and tier one Combatant Command (COCOM) exercises in accordance with events planned per the current approved Integrated Master Test Plan (IMTP). <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Update and expand the 170+ model capability descriptions in MDA's M&S catalog. - Maintain traceability between the M&S requirements database and M&S product development. - Produce capability documents and specifications for M&S product development to enable BMDS Ground Tests, Training events, Exercises, Wargames, Performance Assessments (PAs), and Element Integration. - Support requests to export M&S software to nations or international organizations. - Support Technical Interchange Meetings (TIMs) and the Bilateral Activities via Secure Interactive Link (BASIL) Project Arrangement with the United Kingdom. - Support system engineering capability trades which are essential in the assessment of all BMDS capability deliveries (including BMDS capability deliveries for Phased Adaptive Approach (PAA) Phase II, Homeland Defense and Regional Phased Adaptive Approach). - Implement the Transition Plan to replace the Digital Simulation Architecture (DSA) and Single Stimulation Framework (SSF) with an Objective Simulation Framework (OSF) to support all M&S Use Cases. - Provide integrated verification, validation and accreditation (VV&A) of MDA's M&S at the system level for specific events, to include Technical Assessment, PAs, and Ground Tests that support BMDS fielding decisions, and Combatant Command (COCOM) exercises. 				
<p>Title: M&S Digital Framework, Simulation, Models</p> <p align="right">Articles:</p> <p>Description: The Modeling and Simulation (M&S) Digital Framework, simulation, and models effort includes: development and sustainment of digital products and the architecture framework, and delivery/maintenance of infrastructure for Ballistic Missile Defense System (BMDS) Performance Assessments (PAs), Warfighter events, and BMD International Simulation events.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Developed and delivered releases of Modeling & Simulation (M&S) digital products: -- Digital Simulation Architecture (DSA) framework for use in Performance Assessments (PAs), Pre-and Post-Mission Tests, and initiated real-time venue support to , Command and Control, Battle Management, and Communications (C2BMC) software Spiral Testing through the Multi-Use Simulation Tool (MUST), which is a real-time, BMDS digital simulation utilizing DSA and Element-provided models for use in C2BMC v8.x software spiral testing and predictive analysis. 		12.728 0	16.083 0	14.225 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012
<p>-- Missile Defense Space warning Tool (MDST) to include JTAGS and SBIRS representations for use in Performance Assessments (PAs), Developmental Engineering, and Warfighter training and exercises. MDST supported 139 exercises simulating 35,452 missile launches with a 100% success rate.</p> <p>-- BMD International Simulation for use in BMD demonstrations, BMD education, future concept evaluation, Warfighter wargames, and international collaboration.</p> <p>- Integrated, tested, functionally qualified, and delivered end-to-end BMDS simulations supporting various uses:</p> <p>-- Performance Assessment (PA) Simulation and System Post-Flight Reconstructions (SPFRs).</p> <p>-- Warfighter exercises, Warfighter Training, Element developmental engineering, and Ground Test campaign.</p> <p>- Enabled maintenance of the Extended Air Defense Simulation (EADSIM) code base for use in Warfighter exercises.</p> <p>- Provided software support for PATRIOT System Effectiveness Model (PSEM) for use in Performance Assessments (PAs), SPFRs, and Ground Tests.</p> <p>- Provided operational control and maintenance of Performance Assessment (PA) Simulation ensembles for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL.</p> <p>- Implemented a new spiral development process for digital simulations which included improved system-level verification of component models. Executed and completed four 3-month spirals which improved Element model interoperability.</p> <p>FY 2013 Plans:</p> <p>Development:</p> <p>- Begin migration of Digital Simulation Architecture (DSA) into Objective Simulation Framework (OSF).</p> <p>- Continue requirements management for product development activities (e.g., Element Model integration into OSF's standards-based open architecture).</p> <p>Sustainment:</p> <p>- Sustain the BMD International Simulation (ISIM) and release v9.0 in support of Combatant Command (COCOM) and International Wargames, conceptual planning, BMD visualizations, BMD training/orientation, and M&S demonstrations.</p> <p>- Sustain and delivered major releases of M&S digital products in support of MDA's Phased Adaptive Approach.</p> <p>Approach Phase I/II Performance Assessment associated events:</p> <p>- Release DSA framework v4.1 for use in System Post-Flight Reconstruction (SPFR) and special studies.</p> <p>- Release Missile Defense Space warning Tool (MDST) for use in Warfighter exercises and in anticipation of Performance Assessment 06 (PA06).</p> <p>- Provide software support for Patriot System Effectiveness Model (PSEM) for use in Performance Assessment 06 (PA06).</p>				FY 2013
				FY 2014

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD31: <i>Modeling & Simulation</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012		
<ul style="list-style-type: none"> - Maintain the BMDS Discrete Event Simulation (DE SIM) supporting real-time venues including Warfighter exercises, Warfighter Training, Command and Control, Battle Management, and Communications (C2BMC) software Spiral Testing for MDA's release of C2BMC v8.x development. - Provide software operations/maintenance support to the Extended Air Defense Simulation (EADSIM) code base for use in Warfighter exercises, training venues and COCOM planning tools. <p>Event Integration/Support Operations:</p> <ul style="list-style-type: none"> - Integrate, test, functionally qualify, and deliver end to end BMDS simulations supporting various events (utilizing Digital Simulation Architecture, Missile Defense Space Tool, and Element-provided medium/high-resolution models) to support full-envelope BMDS Performance Assessment (PAs): <ul style="list-style-type: none"> -- Digital Simulation Architecture-Performance (DSA-P) in support of Performance Assessment 04 (PA 04) BMDS PAA Phase 1 Assessment. -- DSA-P in support of Flight Test, Ground-based Midcourse 06B (FTG-06B) System Post Flight Reconstruction (SPFR). -- DSA-P in support of Flight Test, Operational 1 (FTO-01) System Post Flight Reconstruction (SPFR). - Initiate and continue integration, testing end to end BMDS simulations supporting various events (utilizing Digital Simulation Architecture, Missile Defense Space Tool (MDST), and Element-provided medium/high-resolution models) to support full-envelope BMDS Performance Assessments (PAs): <ul style="list-style-type: none"> -- DSA-P in support of Flight Test, Standard Missile 3-20 Event 2 (FTM-20E2) System Post Flight Reconstruction (SPFR). -- Control and maintain Performance Assessment (PA) Simulation ensembles for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL. -- Control and maintain Performance Assessment (PA) Simulation ensembles in support of M&S development, Integration, and events in the Digital Test and Integration Center (DTIC) and Simulation Execution Center (SEC) in Colorado Springs, CO. - Plan, prepare and execute BMDS Model & Simulation Events to include a System Level High fidelity digital event, Two System Post Flight Reconstruction events to support Model Validation of the Hardware-in-the-Loop (HWIL) and digital venues and a System Pre-Mission Event to support a flight test. - Provide early warning support for a Joint Integrated Air and Missile Defense Organization sponsored Joint Distributed Engineering Plant Event and Warfighter event. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Incorporate four advanced M&S performance capability builds into M&S Digital Simulation Architecture (DSA) digital representations to support advanced tracking, discrimination, engagement and associated upper tier debris mitigation, and lower 						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>tier engagement coordination to satisfy Phased Adaptive Approach (PAA) Phase II/III needs in BMDS Performance Assessment test venues.</p> <ul style="list-style-type: none"> - Begin the transition of real-time digital simulation capability to the Objective Simulation Framework (OSF) to support Warfighter Exercises, Warfighter Training, Element spiral development, and Ground Test campaigns. - Integrate, test, functionally qualify, and deliver end to end BMDS simulations supporting various events (utilizing the OSF and Element-provided medium/high-resolution models) to support full-envelope BMDS Performance Assessment (PAs). - Control and maintain Performance Assessment (PA) Simulation ensembles for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL. - Provide digital representations for use during International Simulations (8.1 and 8.2), Missile Defense Space Warning Operations (version 17.0), an FY 2014 Congressional Wargame, and the Multi-National and National Missile Defense Conference Wargames. - Perform operational planning for the FY 2015 BMDS Performance Assessment (PA06a) event. <p>FY 2014 decrease is due to initial consolidation of Digital and HWIL frameworks as part of OSF implementation.</p>				
<p>Title: M&S HWIL Framework, Simulations, Models</p> <p align="right">Articles:</p>		8.438 0	10.663 0	9.431 0
<p>Description: The M&S Hardware-in-the-Loop (HWIL) framework, models and simulations effort develops, maintains and deploys the HWIL framework hardware and software for use at element laboratories and Combatant Command (COCOM) locations to support IMTP test events, Ballistic Missile Defense System (BMDS) capability delivery assessments, Warfighter training, exercises, and wargames.</p> <p>FY 2012 Accomplishments: A portion of the FY 2012 program content is reported under project MD09 PE 0603892C.</p> <ul style="list-style-type: none"> - Developed the Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF). - Integrated the Single Stimulation Framework (SSF) with at COCOM, training, and exercise Host Nation locations, including the ARROW Hardware-in-the-Loop (HWIL) facility. - Continued integration of the Single Stimulation Framework (SSF) with additional Allied/Coalition elements - Completed Cobra Dane closure interface development. - Began integration of Single Stimulation Framework (SSF) with Upgraded Early Warning Radar (UEWR) Clear Air Force Station (AFS). - Provided Single Stimulation Framework (SSF) sustainment, maintenance and fielded product support. - Deployed and integrated the Single Stimulation Framework (SSF) to support Ground Base Mid-Course and BMDS Sensors directorates stand-alone training and the Distributed Multi-Echelon Training System (DMETS) capability. 				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Completed deployment and integration of the Single Stimulation Framework (SSF) Objective Hardware for MDA Elements and a Releasable configuration for Allied and Coalition partners. - Began installation of the Single Stimulation Framework (SSF) software capability and necessary hardware/ maintenance to support a 2nd parallel test string (Ground Test assets only). - Demonstrated initial Open Architecture (OA) redesign capabilities. - Deployed and installed Single Stimulation Framework (SSF) node in fielded AN/TPY-2 shelter. <p>FY 2013 Plans:</p> <p>Development:</p> <ul style="list-style-type: none"> - Migrate Hardware-in-the-Loop (HWIL) functionality into the Objective Simulation Framework (OSF) - Continue requirements management for product development activities (e.g., OSF) <p>Sustainment:</p> <ul style="list-style-type: none"> - Provide sustainment, maintenance and product support of BMDS Hardware-in-the-Loop (HWIL) stimulation framework--Single Stimulation Framework (SSF) for Elements integration, BMDS ground, flight tests and training and support MDA CONUS and host nation exercises - Provide sustainment, maintenance and product support of BDMS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) to support Ground Base Mid-Course (GM) and BMDS Sensors (SN) directorates stand-alone training and the Distributed Multi-Echelon Training System (DMETS) capability - Sustain Single Stimulation Framework (SSF) framework capabilities for GM and SN element framework for Pre-Mission Test (PMT) test support, Countdown training and post flight reconstruction (PFR) - Sustain Single Stimulation Framework (SSF) support to BMDS System Pre-Mission Test (PMT) and Post Flight Reconstruction (PFR) activities - Concept initial Single Stimulation Framework/Objective Simulation Framework (SSF/OSF) Open Architecture redesign capabilities <p>Event Integration/Support Operations:</p> <ul style="list-style-type: none"> - Continue incremental deployment and integration of BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) Objective Hardware for MDA Elements and a Releasable configuration for Allies to modernize SSF Interface Unit (SIU) fleet and minimize obsolescence - Begin integration of Optimistic Sensor Model (OSM) integration into Single Stimulation Framework (SSF) - Integrate the BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) with additional MDA and non-MDA Elements, as they are integrated into the BMDS architecture 			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<ul style="list-style-type: none"> - Initiate execution of the Event Execution Control System (EECS) capability development for the BMDS Concurrent Test, Training and Operations (CTTO) implementation. - Provide for Single Stimulation Framework (SSF) - Begin development of Real Time, scaled Real Time, non Real Time operational model. - Implement improved Instantaneous Object Processing capabilities in BMDS Ground test. - Remove all support for the Missile Defense System Exerciser (MDSE) framework and integrate all Missile Defense System Exerciser (MDSE) mission requirements into Single Stimulation Framework (SSF) contracts and plan for future Objective Simulation Framework (OSF) integration. - Define transition plan from Single Stimulation Framework (SSF) contracts to Objective Simulation Framework (OSF) contracts for BMDS ground test and Warfighter use cases. - Complete installation of BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) software capability and necessary hardware maintenance (MDA/DTR funded) to support a 2nd parallel test string capability. - Begin execution of Cobra Dane air gap closure interface development. - Plan the integration of Single Stimulation Framework (SSF) with Upgraded Early Warning Radar (UEWR) Clear Air Force Station (AFS). <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Deliver the Objective Simulation Framework (OSF) Version 2.0 to begin the transition of Hardware-in-the-loop (HWIL) capabilities. - Deliver improved debris and phenomenology modeling capabilities to support BMDS Phased Adaptive Approach (PAA) Phase III/IV needs. - Incorporate advanced M&S capabilities into the next version of the OSF for tracking, discrimination, engagement and associated upper tier debris mitigation, launch/engage on remote, as well as lower tier engagement coordination to satisfy PAA Phase III/IV needs. - Control and maintain the HWIL Integration Laboratory for Element M&S in Huntsville, AL. - Provide support for scheduled events Global Lightning 14, Terminal Fury 14, Vigilant Shield 14, Global Defender (GDEx06 Part 1), and the Distributed, Focused and Integrated Ground Test Events as presented in the Integrated Master Test Plan (IMTP). <p>FY 2014 decrease is due to initial consolidation of Digital and HWIL frameworks as part of OSF implementation.</p>				
Title: M&S VV&A and Test Operations		13.297	0.000	0.000
Articles:		0	0	0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD31: <i>Modeling & Simulation</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>Description: The M&S Validation and Accreditation (VV&A) and Test Operations effort reports model and system M&S accreditation status, and prepares and delivers system VV&A plans and reports for Ground Tests, Exercises and Digital Performance Assessments.</p> <p>FY 2012 Accomplishments:</p> <ul style="list-style-type: none"> - Provided integrated Verification, Validation and Accreditation (VV&A) of MDA Modeling & Simulation (M&S) at the system level for specific uses, to include Technical Assessments (TAs), Performance Assessment (PA), Ground Tests that support Ballistic Missile Defense System (BMDS) fielding decisions, and tier one Combatant Command (COCOM) exercises. - Developed integrated Verification, Validation and Accreditation (VV&A) event Plans and Reports for Focused Ground Tests, Integrated Ground Tests, Performance Assessments (PAs) (plans only), and COCOM exercises. - Worked closely with Elements, Test Community, System Engineering, and Operational Test Agencies (OTAs) to ensure M&S for each event met intended uses and objectives, and had proper Verification, Validation and Accreditation (VV&A) documentation and evidence, to include benchmarking/anchoring pedigree. - Conducted system-level Verification and Validation (V&V) of threat trajectory and signature; ensured end-to-end environmental implementation was consistent and that correct communications and architecture behaved properly and interoperability was adequately addressed. - Developed and implemented Modeling and Simulation (M&S) V&V standards consistent with industry best practices. - Developed, implemented and provided configuration control of a web-based problem reporting system to capture M&S anomalies and incorporate corrections into requirements process in order to guarantee and measure M&S improvement. - Led BMDS Verification, Validation and Accreditation (VV&A) working group to improve Verification, Validation and Accreditation (VV&A) operations and ultimately improve BMDS performance prediction. - Developed model and simulation target requirements to support Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) test conditions. <p>FY 2013 Plans: FY 2013 Plans have moved to Budget Project MT23 PE 0603890C in accomplishment 'M&S VV&A and Test Operations'</p> <p>FY 2014 Plans: N/A</p>				
<p>Title: M&S Core Truth Modeling (formerly Phenomenology, Lethality, Environment, Threat-Communication)</p> <p align="right">Articles:</p> <p>Description: The Core Truth Model program provides consistent and common Phenomenology, Lethality, Environment, Communications, and Threat models for Ballistic Missile Defense Systems (BMDS) M&S venues and supports all Digital and</p>		8.903 0	11.250 0	9.950 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
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<p>Ground Test Events and Wargaming Exercises. The Core Truth Model efforts are critical in the assessment of all BMDS capability deliveries.</p> <p><i>FY 2012 Accomplishments:</i></p> <ul style="list-style-type: none"> - Produced threat trajectory data using the Threat Modeling Simulation System (TMSS). These data are used to create Integrated Threat Packages (ITP), which provide threat truth data for Ground Tests, Performance Assessments/Technical Assessments (PA/TA), wargames, exercises, Distributed Multi-Echelon Training System (DMETS) events, and MDA Engineering studies and Flight Tests. - Produced Trajectory Generator External (TGx), a desk tool designed for analysts to generate their own engineering trajectories for concept analysis, engineering studies, etc. It uses the same missile models, physics, and environmental models as used in TMSS. TGx is provided to over 150 users including OSD Cost Assessment and Programs Evaluation (CAPE), Joint Integrated Air and Missile Defense Organization (JIAMDO), other MDA users, Ballistic Missile Defense System Operational Test Agency, Service Operational Test Agencies, and Warfighters. - Completed integration of Environment modeling capabilities to provide common and consistent environmental data to digital system-level M&S events. - Developed model and simulation target requirements to support Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) test conditions. - Produced Kinetic Impact Debris Distribution (KIDD) threat inputs and Post Intercept Debris (PID) database for Fast Eagle Inc 1 and GTI-04e Part 1, including validation documentation. - Produced KIDD target inputs and PID database for FTI-01 System Pre-Mission Test (SPMT), sensor assessments, and range safety assessments. - Supported KIDD-based range safety assessments for FTM-15, USFT-4, and FTT-12. - Supported GTX-04 pre and post test Post Intercept Debris assessment. - Supported off-line end game lethality assessments for GTI-04e Part 1 with Parametric Endo-Exo-atmospheric Lethality Simulation (PEELS) as well as accredited PEELS support for FTT-12 IOT&E. - Developed PEELS target models to support FTI-01 and FTG-06b Operational Test Agency assessments. - Supported Nimble Titan 12 event consequence assessments with Post-Engagement Ground Effects Model (PEGEM). - Released KIDD 6.8 and distributed to 230 users in 43 organizations. Released PEELS 12.1 and distributed to 14 users in 7 organizations. - Delivered software beta versions of KIDD 6.8.2 and PEELS 12.2 to IV&V agent and PEGEM API 1.2. - Released software updates of Optical Signature Code (OSC) 21.1 and Optical Signature In-Line Generator (OPTISIG) 7.2 in March 2012; Fast Line-of-Sight Imagery for Target and Exhaust Plume Signatures (FLITES v2) 1.1 in August 2012, and 			
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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD31: <i>Modeling & Simulation</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012
Spacecraft/Orbiter Contamination Representation Accounting for Transiently Emitted Species- Parallel (SOCRATES-P) 2011 in August 2012.				
FY 2013 Plans:				
Development:				
<ul style="list-style-type: none"> - Conduct requirements management for product development activities (e.g., Objective Simulation Framework (OSF)). - Develop capabilities-based and intelligence-credible missile models based on the MDA Threat Systems Engineer specifications. - Initiate several Small Business Innovative Research (SBIR) Phase II Efforts to address Critical Engagement Conditions (CEC) and Empirical Measurement Events (EMEs) identified deficiencies related to Characterization and Incorporation of Vernier Engines within the Plume Modeling Process, Advanced Particle Treatment in Modeling Rocket Exhaust Plumes and Star Background Modeling. - Initiate New phase I Small Business Innovative Research (SBIR) topics to address Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs). 				
Sustainment:				
<ul style="list-style-type: none"> - Conduct requirements management for product development activities (e.g., Optical Signatures Code (OSC), Optical Signatures In-Line Generator (OPTISIG), Kinetic Impact Debris Distribution (KIDD), Parametric Endo/Exo-atmospheric Lethality Simulation (PEELS), Post Engagement Ground Effects Model (PEGEM)). - Provided M&S software development, sustainment and technical support for phenomenology and lethality model, development (e.g., Optical Signature Code (OSC), Optical Signatures In-Line Generator (OPTISIG), Kinetic Impact Debris Distribution (KIDD), Parametric Endo/Exo-atmospheric Lethality Simulation (PEELS), Post Engagement Ground Effects Model (PEGEM), Rocket Plume Flowfield Model (RPFM), Plume Simulation (PLUS), Standard Plume Ultraviolet Radiation Code (SPURC), and Fast Line-of Sight Imagery for Target and Exhaust Plume Signatures (FLITES)). - Assist in the integration and support of endgame lethality utilizing PEELS tool into the modeling frameworks. - Enhance Core Lethality Models (KIDD, PEELS) capabilities to model post intercept debris and engagement lethality to ensure BMDS performance may be accurately modeled to Operational Test Agency (OTA) requirements. - Provide M&S software maintenance and sustainment for the Threat Modeling Simulation System (TMSS) threat production architecture (e.g. integration of new/updated missile models and threat system capabilities) to support Integrated Master Test Plan (IMTP) threat production. - Provide M&S software maintenance and sustainment for the TGx trajectory generator analyst/planner tool (e.g. integration of new/updated missile models and threat system capabilities) to support IMTP events. - Initiate Systems Engineering efforts to support integration of all applicable Core Truth Model functions into Objective Simulation Framework (OSF) framework. 				
FY 2014 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
-Implement next generation truth representations for phenomenology and lethality to meet advanced BMDS capability needs for tracking, discrimination and engagement in support of Phased Adaptive Approach (PAA) Phase III/IV. -Maintain legacy truth representations (e.g., Parametric Endoatmospheric-Exoatmospheric Lethality Simulation (PEELS), Kinetic Intercept Debris Distribution (KIDD), Optical Signatures Code/Optical Signature Inline Generator (OSC/OPTISIG)) until fully transitioned. -Provide M&S software for the Threat Modeling Simulation System (TMSS) threat production architecture (e.g. integration of new/updated missile models and threat system capabilities) to support Integrated Master Test Plan (IMTP) threat production. -Provide M&S software for the TGx trajectory generator analyst/planner tool (e.g. integration of new/updated missile models and threat system capabilities) to support IMTP events. -Continue efforts to support integration of all applicable Core Truth Model functions into Objective Simulation Framework (OSF) framework. -Provide support for scheduled events Global Lightning 14, Terminal Fury 14, Vigilant Shield 14, Global Defender (GDEx06 Part 1), and the Distributed, Focused and Integrated Ground Test Events as presented in the IMTP. FY 2014 decrease is due to initial consolidation of Digital and HWIL frameworks as part of OSF implementation.			
Accomplishments/Planned Programs Subtotals	50.181	46.608	41.223

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	381.041	316.929	268.990		268.990	309.901	227.476	262.488	254.913	Continuing	Continuing
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,143.313	903.172	1,033.903		1,033.903	1,045.500	1,002.568	815.198	781.824	Continuing	Continuing
• 0603888C: <i>Ballistic Missile Defense Test & Targets</i>	88.162	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	88.162
• 0603892C: <i>AEGIS BMD</i>	1,139.019	992.407	937.056		937.056	987.729	1,074.941	880.468	876.685	Continuing	Continuing
• 0603904C: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	58.970	63.043	52.131		52.131	59.893	52.005	61.751	53.511	Continuing	Continuing

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603914C: <i>Ballistic Missile Defense Test</i>	484.838	454.400	375.866		375.866	436.063	378.063	400.157	451.776	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	497.550	435.747	495.257		495.257	516.092	406.611	481.527	463.660	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Modeling & Simulation (M&S) acquisition strategy utilizes full and open competition to develop, acquire and deliver the integrated architectures/frameworks while the Elements, using the same open competition methods, develop and deliver models of their systems. The Digital and Hardware-in-the-Loop (HWIL) product centers integrate the suite of M&S into a composite simulation capability, all based on an open architecture. M&S achieves this end-state via close collaboration between its integrating contractor teams (Digital and HWIL) and those of the Element prime contractors, with additional technical standards and engineering oversight provided by Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Research Centers (UARCs).

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Modeling and Simulation (M&S) Requirements, Design Spt, Scenario Optimization - M&S Reqts & Design- Configuration & Risk Management	C/FFP	ManTech:CO	4.280	1.729		2.185	Oct 2012	1.933	Oct 2013	-		1.933	Continuing	Continuing	Continuing
Modeling and Simulation (M&S) Requirements, Design Spt, Scenario Optimization - M&S Reqts & Design- Integrated Master Plan	C/FFP	ManTech:CO	2.155	1.724		2.178	Oct 2012	1.926	Oct 2013	-		1.926	Continuing	Continuing	Continuing
Modeling and Simulation (M&S) Requirements, Design Spt, Scenario Optimization - M&S Reqts & Design- Product Capability Documents	C/FFP	Boeing:AL	11.640	3.362		4.249	Oct 2012	3.758	Oct 2013	-		3.758	Continuing	Continuing	Continuing
M&S Digital Framework, Simulation, Models - M&S Digital Framework - Integrated Capability for International Programs	C/CPAF	Northrop Grumman:CO	33.998	3.485		4.403	Oct 2012	3.894	Oct 2013	-		3.894	Continuing	Continuing	Continuing
M&S Digital Framework, Simulation, Models - M&S Digital Framework - Integrated Capability for Performance Assessment	C/CPAF	Northrop Grumman:CO	33.067	9.243		11.680	Oct 2012	10.331	Oct 2013	-		10.331	Continuing	Continuing	Continuing
M&S HWIL Framework, Simulations, Models - M&S HWIL - Single Stimulation Framework & Objective Simulation Framework Product Development & Deployment	C/CPAF	Boeing:AL	44.981	8.438		10.663	Oct 2012	9.431	Oct 2013	-		9.431	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
M&S Core Truth Modeling (formerly Phenomenology, Lethality, Environment, Threat-Communication) - M&S Core Truth Modeling - Communication Network Model Development	C/CPAF	Northrop Grumman:CO	2.149	0.266		0.336	Oct 2012	0.297	Oct 2013	-		0.297	Continuing	Continuing	Continuing
M&S Core Truth Modeling (formerly Phenomenology, Lethality, Environment, Threat-Communication) - M&S Core Truth Modeling - Lethality/Phenomenology Modeling	MIPR	AMRDEC:AL	17.889	3.583		4.527	Oct 2012	4.004	Oct 2013	-		4.004	Continuing	Continuing	Continuing
M&S Core Truth Modeling (formerly Phenomenology, Lethality, Environment, Threat-Communication) - M&S Core Truth Modeling - PLET-C Integration, Assembly, Test & Checkout	C/CPAF	Northrop Grumman:CO	2.955	0.421		0.532	Oct 2012	0.471	Oct 2013	-		0.471	Continuing	Continuing	Continuing
M&S Core Truth Modeling (formerly Phenomenology, Lethality, Environment, Threat-Communication) - M&S Core Truth Modeling - Threat Modeling Simulation System	C/CPAF	Northrop Grumman:CO	10.274	2.328		2.942	Oct 2012	2.602	Oct 2013	-		2.602	Continuing	Continuing	Continuing
M&S Core Truth Modeling (formerly Phenomenology, Lethality, Environment, Threat-Communication) - M&S Core Truth Modeling - Trajectory Generator External	C/CPAF	Northrop Grumman:CO	4.719	2.305		2.913	Oct 2012	2.576	Oct 2013	-		2.576	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			168.107	36.884		46.608		41.223		0.000		41.223			

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks

N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
M&S VV&A and Test Operations - M&S VV&A and Test Ops - Ground Test VV&A	C/CPAF	Northrop Grumman:CO	1.221	2.837		0.000		0.000		-		0.000	0.000	4.058	0.000
M&S VV&A and Test Operations - M&S VV&A and Test Ops - M&S Accreditation	C/CPAF	Northrop Grumman:CO	3.683	3.197		0.000		0.000		-		0.000	0.000	6.880	0.000
M&S VV&A and Test Operations - M&S VV&A and Test Ops - Performance Assessment VV&A	C/CPAF	Northrop Grumman:CO	3.395	7.263		0.000		0.000		-		0.000	0.000	10.658	0.000
Subtotal			8.299	13.297		0.000		0.000		0.000		0.000	0.000	21.596	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks
N/A

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	176.406	50.181	46.608	41.223	0.000	41.223			

Remarks
Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Combatant Command Exercise (Vigilant Shield 12) 1Q-FY 2012	▲																											
Ground Test, Distributed O4 (GTD-04d) (Part 2) 1Q-FY 2012	▲																											
Digital Simulation Architecture (DSA) v3.2 1Q-FY 2012	▲																											
Threat Modeling Simulation System (TMSS) v9.1 1Q-FY 2012	▲																											
Combatant Command Exercise (Global Thunder 12) 1Q-FY 2012	▲																											
Ground Test, Integrated O4 (GTI-04) (ISR) FY 2012	✦	✦	✦	✦																								
National Missile Defense Conference Wargame 2Q-FY 2012		▲																										
Ground Test, Focused O4e (GTX-04e) 2Q-FY 2012		▲																										
Single Stimulation Framework (SSF) v1.1.6 2Q-FY 2012		▲																										
Congressional Wargame 2Q-FY 2012		▲																										
Launch Rehearsal Training 2Q-FY 2012		▲																										
FTT-14 System Post-Flight Reconstruction 2Q-FY 2012		▲																										
EUCOM Digisim 2Q-FY 2012		▲																										
Austere Challenge 12 2Q-FY 2012		▲																										
Single Stimulation Framework (SSF) v1.1.5 (2nd HWIL string) 2Q-FY 2012		▲																										
Trajectory Generator External (TGx) v5.2 2Q-FY 2012		▲																										
Multi-Use Simulation Tool (MUST) v1.1 3Q-FY 2012			▲																									
Trajectory Generator External (TGx) v5.3 3Q-FY 2012			▲																									
Nimble Titan 12 3Q-FY 2012			▲																									
Fast Eagle II 3Q-FY 2012			▲																									
Ulchi Freedom Guardian 12 3Q-FY 2012			▲																									
2012 SLV Campaign 3Q-FY 2012			▲																									

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Combatant Command Exercise (Terminal Fury 12) 3Q-FY 2012			▲																									
Combatant Command Exercise (Global Lightning 12) 3Q-FY 2012			▲																									
Upgraded Early Warning Radar (UEWR) Trajectories 3Q-FY 2012			▲																									
Space Based Infrared System (SBIRS) Scenarios 3Q-FY 2012			▲																									
Missile Defense National Team IR Boost Scenarios 3Q-FY 2012			▲																									
Global Defender (GDEx04e(IT)) 4Q-FY 2012				▲																								
Digital Simulation Architecture (DSA) v3.3 4Q-FY 2012				▲																								
Missile Defense Space warning Tool (MDST) v15.0 4Q-FY 2012				▲																								
FTI-01 Best Estimate of Trajectory (BET) 4Q-FY 2012				▲																								
Multi-User Simulation Tool (MUST) Trajectories 4Q-FY 2012				▲																								
PA-04 Risk Reduction Scenarios 4Q-FY 2012				▲																								
FTM-16 Best Estimate of Trajectory (BET) 4Q-FY 2012				▲																								
Combatant Command Exercise (Vigilant Shield 13) 1Q-FY 2013					△																							
Digital Simulation Architecture (DSA) Performance v2.0 1Q-FY 2013					△																							
Ground Test, Integrated 04e (GTI-04e) Verification, Validation, and Accreditation 1Q-FY 2013					△																							
Congressional Wargame 2Q-FY 2013						△																						
National Missile Defense Conference Wargame 2Q-FY 2013						△																						
International Simulation v9.0 2Q-FY2013						△																						
Missile Defense Space warning Tool (MDST) v16.0 2Q-FY 2013						△																						

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Combatant Command Exercise (Global Thunder 13) 2Q-FY 2013					△																							
Combatant Command Exercise (Terminal Fury 13) 3Q-FY 2013						△																						
Ground Test, Integrated 04e (GTI-04e) Developmental Test 3Q-FY 2013						△																						
Combatant Command Exercise (Global Lightning 13) 3Q-FY 2013						△																						
Ground Test, Integrated 04 (GTI-04) Operational Test 3Q-FY 2013						△																						
Objective Simulation Framework (OSF) v1.0 3Q-FY 2013						△																						
Digital Simulation Architecture (DSA) v5.0 3Q-FY 2013						△																						
Assured Response (AR04e) 3Q-FY 2013						△																						
Performance Assessment (PA04) 4Q-FY 2013							△																					
Ground Test, Distributed 04 (GTD-04) Developmental Test 4Q-FY 2013							△																					
Ground Test, Distributed 04 (GTD-04) Operational Test 4Q-FY 2013							△																					
Multi-National Missile Defense Conference Wargame 4Q-FY 2013							△																					
Single Stimulation Framework (SSF) v1.1.7 4Q-FY 2013							△																					
Combatant Command Exercise (Global Thunder 14) 1Q-FY 2014								△																				
Missile Defense Space warning Tool (MDST) v15.1 1Q-FY 2014								△																				
Ground Test, Distributed 04e (GTD-04e Part 2) DT/OT 1Q-FY 2014								△																				
Combatant Command Exercise (Vigilant Shield 14) 1Q-FY 2014								△																				
Ground Test, Distributed 04e Part 2 (GTD-04e Part 2) BMDS Distributed Ground Test 1Q-FY 2014								△																				
Congressional Wargame 2Q-FY 2014									△																			

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity +
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✦

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
National Missile Defense Conference Wargame 2Q-FY 2014										△																		
Missile Defense Space warning Tool (MDST) v17.0 2Q-FY 2014										△																		
Warfighter Trial Period -04e (WFTP-04e) 2Q-FY 2014										△																		
Combatant Command Exercise (Global Lightning 14) 3Q-FY 2014											△																	
Fast Event 1											△																	
Ground Test, Focused 06 (GTX-06) 3Q-FY 2014											△																	
International Simulation v8.1 3Q-FY 2014											△																	
Combatant Command Exercise (Terminal Fury 14) 3Q-FY 2014											△																	
International Simulation v8.2 3Q-FY 2014											△																	
Fast Event 2											△																	
Objective Simulation Framework (OSF) v2.0 4Q-FY 2014												△																
Multi-National Missile Defense Conference Wargame 4Q-FY 2014												△																
Ground Test, Integrated 06 Part 1 (GTI-06 Part 1) BMDS Integrated HWIL Ground Test 1Q-FY 2015													△															
Combatant Command Exercise (Global Thunder 15) 1Q-FY 2015													△															
Combatant Command Exercise (Vigilant Shield 15) 1Q-FY 2015													△															
Congressional Wargame 2Q-FY 2015														△														
Ground Test, Integrated 06 Part 2 (GTI-06 Part 2) Operational Test 2Q-FY 2015														△														
National Missile Defense Conference Wargame 2Q-FY 2015														△														
Missile Defense Space warning Tool (MDST) v18.0 2Q-FY 2015														△														
Ground Test, Distributed 06 Part 1 (E) (GTD-06 Part 1 E) 2Q-FY 2015														△														

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Combatant Command Exercise (Global Lightning 15) 3Q-FY 2015														△														
International Simulation v8.3 3Q-FY 2015														△														
Ground Test, Distributed 06 Part 1 (C) (GTD-06 Part 1 C) 3Q-FY 2015														△														
Combatant Command Exercise (Terminal Fury 15) 3Q-FY 2015														△														
Ground Test, Integrated 06 Part 2 (GTI-06 Part 2) BMDS Integrated HWIL Ground Test 4Q-FY 2015															△													
Global Defender (GDEx06 Part 2) 4Q-FY 2015															△													
Objective Simulation Framework (OSF) v3.0 4Q-FY 2015															△													
Multi-National Missile Defense Conference Wargame 4Q-FY 2015															△													
Ground Test, Integrated 06 Part 2 (GTI-06 Part 2) Operational Test 1Q-FY 2016																△												
Combatant Command Exercise (Global Thunder 16) 1Q-FY 2016																△												
Ground Test, Distributed 06 Part 2 (N/P/E) (GTD-06 Part 2 (N/P/E)) Operational Test 1Q-FY 2016																	△											
Ground Test, Distributed 06 Part 2 (N/P/E) (GTD-06 Part 2 (N/P/E)) Developmental Test 1Q-FY 2016																	△											
Warfighter Trial Period -06 Part 2(WFTP-06 Part 2) 2Q-FY 2016																		△										
International Simulation v8.4 3Q-FY 2016																			△									
Ground Test, Focused 07a a (N/P/E/C) (GTX-07a (N/P/E/C)) 3Q-FY 2016																				△								
Combatant Command Exercise (Global Lightning 16) 3Q-FY 2016																					△							
GDEx 07a 3Q-FY 2016																						△						
Combatant Command Exercise (Terminal Fury 16) 3Q-FY 2016																							△					

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Missile Defense Agency	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>
PROJECT MD31: <i>Modeling & Simulation</i>	

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity +
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✦

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Objective Simulation Framework (OSF) v4.0 4Q-FY 2016																			△									
TA 07 DT 4Q-FY 2016																			△									
Ground Test, Distributed 07a Part 1 (P) (GTD-7a Part 1 P) Developmental Test 4Q-FY 2016																			△									
Ground Test, Distributed 07a Part 1 (P) (GTD-7a Part 1 P) Operational Test 4Q-FY 2016																			△									
Ground Test, Integrated 07a (GTI-07a) Operational Test 4Q-FY 2016																			△									
Ground Test, Integrated 07a (GTI-07a) Developmental Test 4Q-FY 2016																			△									
Combatant Command Exercise (Global Thunder 17) 1Q-FY 2017																				△								
Ground Test, Distributed 07a Part 1 (N/P) (GTD-07a Part 1 (N/P)) Developmental Test 1Q-FY 2017																				△								
Vigilant Shield 17 1Q-FY 2017																				△								
Ground Test, Distributed 07a Part 1 (N/E) (GTD-07a Part 1 N/E) Operational Test 1Q-FY 2017																				△								
Ground Test, Distributed 07a Part 1 (N/E) (GTD-07a Part 1 N/E) Developmental Test 1Q-FY 2017																				△								
Ground Test, Distributed 07a Part 1 (N/P) (GTD-07a Part 1 (N/P)) Operational Test 1Q-FY 2017																				△								
Performance Assessment (PA 07a) 2Q-FY 2017																					△							
Ground test, Distributed 07a Part 2 (C) (GTD-07a Part 2 C) Operational Test 2Q-FY 2017																					△							
Ground Test, Distributed 07a Part 2 (E) (GTD-07a Part 2 E) Developmental Test 2Q-FY 2017																					△							
Ground Test, Distributed 07a Part 2 (C) (GTD-07a Part 2 C) Developmental Test 2Q-FY 2017																					△							
Ground Test, Distributed 07a Part 2 (E) (GTD-07a Part 2 E) Operational Test 2Q-FY 2017																					△							
Combatant Command Exercise (Global Lightning 17) 3Q-FY 2017																						△						
GDEx 07b Part 1 3Q-FY 2017																						△						

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Combatant Command Exercise (Vigilant Shield 12) 1Q-FY 2012	1	2012	1	2012
Ground Test, Distributed 04 (GTD-04d) (Part 2) 1Q-FY 2012	1	2012	1	2012
Digital Simulation Architecture (DSA) v3.2 1Q-FY 2012	1	2012	1	2012
Threat Modeling Simulation System (TMSS) v9.1 1Q-FY 2012	1	2012	1	2012
Combatant Command Exercise (Global Thunder 12) 1Q-FY 2012	1	2012	1	2012
Ground Test, Integrated 04 (GTI-04) (ISR) FY 2012	1	2012	4	2012
National Missile Defense Conference Wargame 2Q-FY 2012	2	2012	2	2012
Ground Test, Focused 04e (GTX-04e) 2Q-FY 2012	2	2012	2	2012
Single Stimulation Framework (SSF) v1.1.6 2Q-FY 2012	2	2012	2	2012
Congressional Wargame 2Q-FY 2012	2	2012	2	2012
Launch Rehearsal Training 2Q-FY 2012	2	2012	2	2012
FTT-14 System Post-Flight Reconstruction 2Q-FY 2012	2	2012	2	2012
EUCOM Digisim 2Q-FY 2012	2	2012	2	2012
Austere Challenge 12 2Q-FY 2012	2	2012	2	2012
Single Stimulation Framework (SSF) v1.1.5 (2nd HWIL string) 2Q-FY 2012	2	2012	2	2012
Trajectory Generator External (TGx) v5.2 2Q-FY 2012	2	2012	2	2012
Multi-Use Simulation Tool (MUST) v1.1 3Q-FY 2012	3	2012	3	2012
Trajectory Generator External (TGx) v5.3 3Q-FY 2012	3	2012	3	2012
Nimble Titan 12 3Q-FY 2012	3	2012	3	2012
Fast Eagle II 3Q-FY 2012	3	2012	3	2012
Ulchi Freedom Guardian 12 3Q-FY 2012	3	2012	3	2012
2012 SLV Campaign 3Q-FY 2012	3	2012	3	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Combatant Command Exercise (Terminal Fury 12) 3Q-FY 2012	3	2012	3	2012
Combatant Command Exercise (Global Lightning 12) 3Q-FY 2012	3	2012	3	2012
Upgraded Early Warning Radar (UEWR) Trajectories 3Q-FY 2012	3	2012	3	2012
Space Based Infrared System (SBIRS) Scenarios 3Q-FY 2012	3	2012	3	2012
Missile Defense National Team IR Boost Scenarios 3Q-FY 2012	3	2012	3	2012
Global Defender (GDEx04e(IT)) 4Q-FY 2012	4	2012	4	2012
Digital Simulation Architecture (DSA) v3.3 4Q-FY 2012	4	2012	4	2012
Missile Defense Space warning Tool (MDST) v15.0 4Q-FY 2012	4	2012	4	2012
FTI-01 Best Estimate of Trajectory (BET) 4Q-FY 2012	4	2012	4	2012
Multi-User Simulation Tool (MUST) Trajectories 4Q-FY 2012	4	2012	4	2012
PA-04 Risk Reduction Scenarios 4Q-FY 2012	4	2012	4	2012
FTM-16 Best Estimate of Trajectory (BET) 4Q-FY 2012	4	2012	4	2012
Combatant Command Exercise (Vigilant Shield 13) 1Q-FY 2013	1	2013	1	2013
Digital Simulation Architecture (DSA) Performance v2.0 1Q-FY 2013	1	2013	1	2013
Ground Test, Integrated 04e (GTI-04e) Verification, Validation, and Accreditation 1Q-FY 2013	1	2013	1	2013
Congressional Wargame 2Q-FY 2013	2	2013	2	2013
National Missile Defense Conference Wargame 2Q-FY 2013	2	2013	2	2013
International Simulation v9.0 2Q-FY2013	2	2013	2	2013
Missile Defense Space warning Tool (MDST) v16.0 2Q-FY 2013	2	2013	2	2013
Combatant Command Exercise (Global Thunder 13) 2Q-FY 2013	2	2013	2	2013
Combatant Command Exercise (Terminal Fury 13) 3Q-FY 2013	3	2013	3	2013
Ground Test, Integrated 04e (GTI-04e) Developmental Test 3Q-FY 2013	3	2013	3	2013
Combatant Command Exercise (Global Lightning 13) 3Q-FY 2013	3	2013	3	2013
Ground Test, Integrated 04 (GTI-04) Operational Test 3Q-FY 2013	3	2013	3	2013
Objective Simulation Framework (OSF) v1.0 3Q-FY 2013	3	2013	3	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Digital Simulation Architecture (DSA) v5.0 3Q-FY 2013	3	2013	3	2013
Assured Response (AR04e) 3Q-FY 2013	3	2013	3	2013
Performance Assessment (PA04) 4Q-FY 2013	4	2013	4	2013
Ground Test, Distributed 04 (GTD-04) Developmental Test 4Q-FY 2013	4	2013	4	2013
Ground Test, Distributed 04 (GTD-04) Operational Test 4Q-FY 2013	4	2013	4	2013
Multi-National Missile Defense Conference Wargame 4Q-FY 2013	4	2013	4	2013
Single Stimulation Framework (SSF) v1.1.7 4Q-FY 2013	4	2013	4	2013
Combatant Command Exercise (Global Thunder 14) 1Q-FY 2014	1	2014	1	2014
Missile Defense Space warning Tool (MDST) v15.1 1Q-FY 2014	1	2014	1	2014
Ground Test, Distributed 04e (GTD-04e Part 2) DT/OT 1Q-FY 2014	1	2014	1	2014
Combatant Command Exercise (Vigilant Shield 14) 1Q-FY 2014	1	2014	1	2014
Ground Test, Distributed 04e Part 2 (GTD-04e Part 2) BMDS Distributed Ground Test 1Q-FY 2014	1	2014	1	2014
Congressional Wargame 2Q-FY 2014	2	2014	2	2014
National Missile Defense Conference Wargame 2Q-FY 2014	2	2014	2	2014
Missile Defense Space warning Tool (MDST) v17.0 2Q-FY 2014	2	2014	2	2014
Warfighter Trial Period -04e (WFTP-04e) 2Q-FY 2014	2	2014	2	2014
Combatant Command Exercise (Global Lightning 14) 3Q-FY 2014	3	2014	3	2014
Fast Event 1	3	2014	3	2014
Ground Test, Focused 06 (GTX-06) 3Q-FY 2014	3	2014	3	2014
International Simulation v8.1 3Q-FY 2014	3	2014	3	2014
Combatant Command Exercise (Terminal Fury 14) 3Q-FY 2014	3	2014	3	2014
International Simulation v8.2 3Q-FY 2014	3	2014	3	2014
Fast Event 2	3	2014	3	2014
Objective Simulation Framework (OSF) v2.0 4Q-FY 2014	4	2014	4	2014
Multi-National Missile Defense Conference Wargame 4Q-FY 2014	4	2014	4	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Ground Test, Integrated 06 Part 1 (GTI-06 Part 1) BMDS Integrated HWIL Ground Test 1Q-FY 2015	1	2015	1	2015
Combatant Command Exercise (Global Thunder 15) 1Q-FY 2015	1	2015	1	2015
Combatant Command Exercise (Vigilant Shield 15) 1Q-FY 2015	1	2015	1	2015
Congressional Wargame 2Q-FY 2015	2	2015	2	2015
Ground Test, Integrated 06 Part 2 (GTI-06 Part 2) Operational Test 2Q-FY 2015	2	2015	2	2015
National Missile Defense Conference Wargame 2Q-FY 2015	2	2015	2	2015
Missile Defense Space warning Tool (MDST) v18.0 2Q-FY 2015	2	2015	2	2015
Ground Test, Distributed 06 Part 1 (E) (GTD-06 Part 1 E) 2Q-FY 2015	2	2015	2	2015
Combatant Command Exercise (Global Lightning 15) 3Q-FY 2015	3	2015	3	2015
International Simulation v8.3 3Q-FY 2015	3	2015	3	2015
Ground Test, Distributed 06 Part 1 (C) (GTD-06 Part 1 C) 3Q-FY 2015	3	2015	3	2015
Combatant Command Exercise (Terminal Fury 15) 3Q-FY 2015	3	2015	3	2015
Ground Test, Integrated 06 Part 2 (GTI-06 Part 2) BMDS Integrated HWIL Ground Test 4Q-FY 2015	4	2015	4	2015
Global Defender (GDEx06 Part 2) 4Q-FY 2015	4	2015	4	2015
Objective Simulation Framework (OSF) v3.0 4Q-FY 2015	4	2015	4	2015
Multi-National Missile Defense Conference Wargame 4Q-FY 2015	4	2015	4	2015
Ground Test, Integrated 06 Part 2 (GTI-06 Part 2) Operational Test 1Q-FY 2016	1	2016	1	2016
Combatant Command Exercise (Global Thunder 16) 1Q-FY 2016	1	2016	1	2016
Ground Test, Distributed 06 Part 2 (N/P/E) (GTD-06 Part 2 (N/P/E)) Operational Test 1Q-FY 2016	1	2016	1	2016
Ground Test, Distributed 06 Part 2 (N/P/E) (GTD-06 Part 2 (N/P/E)) Developmental Test 1Q-FY 2016	1	2016	1	2016
Warfighter Trial Period -06 Part 2(WFTP-06 Part 2) 2Q-FY 2016	2	2016	2	2016
International Simulation v8.4 3Q-FY 2016	3	2016	3	2016

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Ground Test, Focused 07a a (N/P/E/C) (GTX-07a (N/P/E/C)) 3Q-FY 2016	3	2016	3	2016
Combatant Command Exercise (Global Lightning 16) 3Q-FY 2016	3	2016	3	2016
GDEx 07a 3Q-FY 2016	3	2016	3	2016
Combatant Command Exercise (Terminal Fury 16) 3Q-FY 2016	3	2016	3	2016
Objective Simulation Framework (OSF) v4.0 4Q-FY 2016	4	2016	4	2016
TA 07 DT 4Q-FY 2016	4	2016	4	2016
Ground Test, Distributed 07a Part 1 (P) (GTD-7a Part 1 P) Developmental Test 4Q-FY 2016	4	2016	4	2016
Ground Test, Distributed 07a Part 1 (P) (GTD-7a Part 1 P) Operational Test 4Q-FY 2016	4	2016	4	2016
Ground Test, Integrated 07a (GTI-07a) Operational Test 4Q-FY 2016	4	2016	4	2016
Ground Test, Integrated 07a (GTI-07a) Developmental Test 4Q-FY 2016	4	2016	4	2016
Combatant Command Exercise (Global Thunder 17) 1Q-FY 2017	1	2017	1	2017
Ground Test, Distributed 07a Part 1 (N/P) (GTD-07a Part 1 (N/P)) Developmental Test 1Q-FY 2017	1	2017	1	2017
Vigilant Shield 17 1Q-FY 2017	1	2017	1	2017
Ground Test, Distributed 07a Part 1 (N/E) (GTD-07a Part 1 N/E) Operational Test 1Q-FY 2017	1	2017	1	2017
Ground Test, Distributed 07a Part 1 (N/E) (GTD-07a Part 1 N/E) Developmental Test 1Q-FY 2017	1	2017	1	2017
Ground Test, Distributed 07a Part 1 (N/P) (GTD-07a Part 1 (N/P)) Operational Test 1Q-FY 2017	1	2017	1	2017
Performance Assessment (PA 07a) 2Q-FY 2017	2	2017	2	2017
Ground test, Distributed 07a Part 2 (C) (GTD-07a Part 2 C) Operational Test 2Q-FY 2017	2	2017	2	2017
Ground Test, Distributed 07a Part 2 (E) (GTD-07a Part 2 E) Developmental Test 2Q-FY 2017	2	2017	2	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Ground Test, Distributed 07a Part 2 (C) (GTD-07a Part 2 C) Developmental Test 2Q-FY 2017	2	2017	2	2017
Ground Test, Distributed 07a Part 2 (E) (GTD-07a Part 2 E) Operational Test 2Q-FY 2017	2	2017	2	2017
Combatant Command Exercise (Global Lightning 17) 3Q-FY 2017	3	2017	3	2017
GDEx 07b Part 1 3Q-FY 2017	3	2017	3	2017
Combatant Command Exercise (Terminal Fury 17) 3Q-FY 2017	3	2017	3	2017
Ground Test, Integrated 07b (GTI-07b) 1Q-FY 2018	1	2018	1	2018
Combatant Command Exercise (Terminal Fury 18) 3Q-FY 2018	3	2018	3	2018
Combatant Command Exercise (Global Lightning 18) 3Q-FY 2018	3	2018	3	2018
GDEx 07b Part 2 3Q-FY 2018	3	2018	3	2018
Performance Assessment (PA07b DT) 3Q-FY 2018	3	2018	3	2018
Ground Test, Distributed 07b Part 1 (GTD-07b Part 1) 4Q-FY 2018	4	2018	4	2018
Ground Test, Distributed 07b Part 2 (GTD-07b Part 2) 4Q-FY 2018	4	2018	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
MD32: <i>Quality, Safety, and Mission Assurance</i>	65.009	28.528	34.388	30.140	-	30.140	30.905	32.006	31.834	31.949	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification

Quality:
Provides on-site Quality Assurance (QA) inspection for all ground and flight tests to ensure that all processes and procedures are adhered to and no short cuts or deviations occur. Quality management system audits are performed on the sub tier supply chain to determine adequacy of contractor requirement flow down and sub tier supplier compliance to industry standards. Quality Subject Matter Experts (SMEs) attend BMDS configuration control boards to ensure quality is implemented across all Programs. Provide quality on-site formal inspection and resolution when troubled suppliers are identified. Initiate and lead on-site Joint Government and Industry Team field support and expertise to assist when critical sole source suppliers are failing. Team conducts initiatives to revamp sole source suppliers by assisting them to get healthy and perform at world class levels. Establishes consistent acquisition and award fee contractual requirements to ensure that a strategic approach is applied to all mission critical systems. Maintains MDA Assurance Provisions for the Agency.

Safety:
Responsible for system safety of the Ballistic Missile Defense System (BMDS) and for the Safety and Occupational Health of personnel located in the National Capital Region (NCR); Huntsville, Alabama; Fort Greely, Alaska; Vandenberg Air Force Base (VAFB), California; and, Dahlgren, VA. Also responsible for ensuring the overall safety of the civilian, contractor and military workforce. BMDS Safety Officers (BSO) provides on-site support 24 hours a day, 7 days a week, 365 days a year to ensure operational safety of systems. Quality, Safety, and Mission Assurance verifies that all systems are functioning and tracking against actual verified targets and that all associated processes and procedures are strictly followed.

Mission Assurance:
Provides in-plant MDA Assurance Representatives (MARs) for the Missile Defense Agency (MDA) at government and contractor facilities. MARs are Government Mission Assurance and Quality experts who provide quality and technical oversight of contractor manufacturing. Mission Assurance Audits are conducted which focus on design margin, the effectiveness of acceptance testing and the sufficiency of manufacturing processes. Audits are performed for contractual requirements, internal requirements, and industry best practices. These audits are one of MDA's most effective methods of enabling change among the MDA contractors and suppliers.

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Quality, Safety, and Assurance provides Subject Matter Experts (SMEs) who attend all technical reviews (i.e. Design, Test, Mission Readiness Reviews, and Failure Review Boards) to ensure mission assurance principles are consistently implemented across the Ballistic Missile Defense System (BMDS). Quality, Safety, and Mission Assurance develops overarching design and quality standards such as the MDA Assurance Provisions (MAP) for MDA which enhances BMDS reliability. Hardware acceptance reviews and pedigree documentation reviews are performed to ensure all manufacturing rework and repair is performed within approved processes.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
<p>Title: Quality, Safety & Mission Assurance</p> <p align="right">Articles:</p> <p>Description: N/A</p> <p>FY 2012 Accomplishments: Quality: Provided non-advocate independent quality oversight/support to Missile Defense Agency key engineering and configuration management forums Performed configuration management verification and reconciliation for all major flight and ground test assets Maintained process control over integration delivery and conducted quality assurance of all major flight and ground tests Worked with Defense Contract Management Agency (DCMA) and created a DoD supplier database for assessing supplier performance Developed Quality, Safety, and Mission Assurance (QSMA) acquisition & award fee language for consistent application across MDA Created draft update to the MDA Assurance Provisions (MAP)</p> <p>Safety: Maintained on-site safety oversight at key suppliers and Government facilities Conducted safety risk assessments per The Department of Defense Standards Practice for System Safety, of all test and operational systems and ensured catastrophic risks remained improbable Conducted system analysis/assessments such as safety risk assessments, failure modes and effects criticality analysis, safety hazards analysis etc., to minimize flight and operational system risks</p> <p>Mission Assurance: Ensured non-conformance reporting, tracking, and mitigation for all major flight and ground tests Provided technical expertise in internal Top Level Decision technical meetings; identified and determined if a mission assurance/safety/quality subject was properly represented and/or needed to be elevated to the Director</p>	28.528 0	34.388 0	30.140 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>Performed mission assurance audits, production readiness assessments, pedigree reviews and facility assessments at mission critical suppliers, including sub-tier suppliers.</p> <p>BMDS Safety Officers (BSOs): Provided 24 hours a day, 7 days a week, 365 days a year safety monitoring of operational and test systems to ensure safe transition between test and operations Monitored and tracked non-conformance behavior of the operational system. Coordinated with Warfighter and Quality, Safety, and Mission Assurance on proper root cause and resolution of all anomalies</p> <p>MDA Parts and Materials Program: Enhanced BMDS reliability through the following activities: Enforced Program compliance to the Missile Defense Agency Part, Material and Processes Assurance Provisions (PMAP) Provided a Part and Material knowledge center to address Program and Supplier part and material issues arising from development or fielded systems Updated the Agency's preferred parts and materials list database to facilitate new system design and to identify part obsolescence issues</p> <p>Acquisition Support: Ensured all new acquisitions are in compliance with the MDA Assurance Provisions (MAP), the MDA Parts, Materials and Processes Assurance Provisions (PMAP) and all applicable Defense Federal Acquisition Regulation (DFAR), Federal Acquisition Regulation (FAR), and clauses regarding quality, safety and mission assurance Updated the MAP/PMAP to incorporate the latest design, test manufacturing, quality, safety and mission assurance methods to improve future product reliability. Improved MDA's acquisition strategy through participation in the definition and determination of all award fees</p> <p>Technical Assistance to MDA Elements: Performed independent/non-advocate reviews, such as design certification, pedigree, failure, preliminary design, critical design and technical interchange reviews ensuring compliance with industry best practices Provided mission assurance support to major failure review boards to ensure comprehensive mitigation strategies for operational assets were employed</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>Provided propulsion, solid rocket motor, avionics, mechanical structures, guidance, navigation and control, and parts, materials and processes expertise to programs to enhance reliability.</p> <p>Intra-Agency & Industry Activities: Performed major stakeholder quality initiatives to improve quality of products, improve onsite processes, and internal requirements at critical sole source suppliers Participated in the Defense Standardization Board and ensured MDA had an equal voice in the specification and standard requirements used across the DoD Initiated & Led quality, safety and mission assurance forums to obtain lessons learned and understand/promote new requirements or methods</p> <p>Safety and Occupational Health: Ensured compliance with DoD Safety and Occupational Health regulations and requirements Performed all required Occupational Safety and Health Inspections of MDA facilities including those in the National Capital Region, Huntsville, AL, Colorado, Vandenberg Air Force Base and Dahlgren, VA Monitored / responded to reports of incidents affecting the health and safety of MDA employees</p> <p>FY 2013 Plans: Quality: Provide Government inspection and process control for flight test operations Perform non-conformance reporting, tracking, and mitigation for all major flight and ground tests Provide non-advocate independent quality oversight/support to Agency operations such as configuration control boards, engineering forums, and material release activities Perform configuration management verification and reconciliation for all major flight and ground test assets</p> <p>Safety: Maintain on-site safety oversight at key suppliers and Government facilities Conduct safety risk assessments per Department of Defense Standards on all test and operational systems to ensure catastrophic risks remain improbable</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012
<p>Conduct system analysis/assessments such as safety risk assessments, failure modes and effects criticality analysis, safety hazards analysis etc., to minimize flight and operational system risks</p> <p>Mission Assurance:</p> <p>Provide the Missile Defense Agency Director non-advocate, independent technical assessments on system, subsystem and component design, manufacturing and test activities in support of operational deployment and flight test activities</p> <p>Provide non-advocate technical support to Missile Defense Agency and Program risk boards, configuration control boards, technical interchange meetings and failure review boards</p> <p>Conduct Mission Assurance audits throughout the Missile Defense Agency's supply chain</p> <p>Provide in-plant Mission Assurance and Quality Representatives at 23 Mission Critical Suppliers</p> <p>BMDS Safety Officers (BSOs):</p> <p>Provide 24 hours a day, 7 days a week, 365 days a year safety monitoring of operational and test systems to ensure safe transition between test and operations</p> <p>Monitor and track non-conformance behavior of the operational and flight test systems</p> <p>Perform software and hardware configuration verification along with supporting the Warfighter to asset management</p> <p>Provide safety support for Eastern, Western and Pacific Range activities such as safety training and certification</p> <p>MDA Parts and Materials Program:</p> <p>Enhance BMDS reliability through the following activities:</p> <p>Enforce Program compliance to the Missile Defense Agency Part, Material and Processes Assurance Provisions (PMAP)</p> <p>Provide a Part and Material knowledge center to address Program and Supplier part and material issues arising from development or fielded systems</p> <p>Update the Agency's preferred parts and materials list database to facilitate new system design and to identify part obsolescence issues</p> <p>Pursue remedies against counterfeit parts</p>				FY 2013
				FY 2014

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>Acquisition Support:</p> <p>Ensure all new acquisitions are in compliance with the MDA Assurance Provisions (MAP), the MDA Parts, Materials and Processes Assurance Provisions and all applicable Defense Federal Acquisition Regulation (DFAR), Federal Acquisition Regulation (FAR), and clauses regarding quality, safety and mission assurance</p> <p>Update the Missile Defense Agency Assurance Provisions (MAP) and the MDA Parts Materials and Processes Mission Assurance Plan (PMAP) to incorporate design, test, manufacturing, quality, safety, and mission assurance methods to further improve future product reliability.</p> <p>Improve MDA's acquisition strategy through participation in the definition and determination of all award fees</p> <p>Technical Assistance to MDA Elements:</p> <p>Perform independent/non-advocate reviews, such as design certification, pedigree, failure, preliminary design, critical design and technical interchange reviews to ensure compliance with industry best practices</p> <p>Provide mission assurance support to major failure review boards to ensure comprehensive mitigation strategies for operational assets are employed</p> <p>Provide propulsion, solid rocket motor, avionics, mechanical structures, guidance, navigation and control, and parts, materials, and processes expertise to enhance reliability.</p> <p>Intra-Agency & Industry Activities:</p> <p>Perform major stakeholder quality initiatives to improve quality of products, improve onsite processes, and internal requirements at critical sole source suppliers</p> <p>Participate in the Defense Standardization Board to ensure that MDA has an equal voice in the specification and standard requirements used across the DoD</p> <p>Initiate and lead quality, safety, and mission assurance forums to obtain lessons learned and understand/promote new requirements or methods</p> <p>Safety and Occupational Health:</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Ensure compliance with DoD Safety and Occupational Health regulations and requirements Perform all required Occupational Safety and Health inspections of MDA facilities including those in the National Capital Region, Huntsville, AL, Colorado, Vandenberg Air Force Base and Dahlgren, VA. Monitor/respond to reports of incidents affecting the health and safety of MDA employees. FY 2014 Plans: Continuation of FY 2013 plans. -Decrease from FY 2013 to FY 2014 reflects consolidation of like efforts.				
Accomplishments/Planned Programs Subtotals		28.528	34.388	30.140
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy The execution of an effective Quality, Safety and Mission Assurance program is carried out in collaboration with subject matter expertise found in the Government, Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC), Contract Support Services (CSS), and Industry.				
E. Performance Metrics N/A				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Quality, Safety & Mission Assurance - Agency Safety & Occupational Health	C/CPFF	Various Multi:AL, CO, AK, DC	0.879	0.300		0.309	Oct 2012	0.291	Oct 2013	-		0.291	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - Audits & Quality On-site Support	MIPR	NSWC Corona:AL, CA	5.246	2.600		3.178	Oct 2012	2.500	Oct 2013	-		2.500	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - BMDS Mission Assurance Agency Operations	MIPR	AIS:AL	2.870	0.875		0.800	Oct 2012	0.800	Oct 2013	-		0.800	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - BMDS Quality Support	C/CPFF	AIS:AL	3.004	1.000		1.200	Oct 2012	1.000	Oct 2013	-		1.000	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - BMDS Safety	C/CPFF	APT, INC:AL	4.000	1.268		1.304	Oct 2012	1.000	Oct 2013	-		1.000	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - BMDS Safety Officers	MIPR	AMRDEC:AL	2.000	0.649		0.547	Oct 2012	0.319	Oct 2013	-		0.319	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - HQ & Core Management	MIPR	AMRDEC:AL	1.000	0.250		0.300	Oct 2012	0.300	Oct 2013	-		0.300	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - In-Plant Quality Support (MARS)	C/CPFF	Various Multi:AL, AK, CA, CO, FL, HI, NK, MA, MO, MD, UT	4.021	1.455		2.511	Oct 2012	1.815	Oct 2013	-		1.815	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Quality, Safety & Mission Assurance - Independent Readiness Review Team	C/CPFF	AIS:AL	1.818	0.719		0.773	Oct 2012	0.773	Oct 2013	-		0.773	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - Mission Assurance Subject Matter Experts	C/CPFF	APT, INC.:AL	3.125	0.968		0.993	Oct 2012	0.846	Oct 2013	-		0.846	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - Operations Support	MIPR	Various Multi:AL, CA	1.149	1.000		1.100	Oct 2012	0.900	Oct 2013	-		0.900	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - Parts, Materials and Processes (PMP) Program	MIPR	Various Multi:AL, CA, IN	3.338	1.399		1.800	Oct 2012	1.500	Oct 2013	-		1.500	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - Parts, Materials and Processes - PMP - Program	C/CPFF	APT, INC:AL	1.824	0.217		0.549	Oct 2012	0.545	Oct 2013	-		0.545	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - Pedigree & Design Certification - FFRDC	MIPR	Aerospace:AL, CA	6.750	2.417		2.920	Oct 2012	2.023	Oct 2013	-		2.023	Continuing	Continuing	Continuing
Subtotal			41.024	15.117		18.284		14.612		0.000		14.612			

Remarks

N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Quality, Safety & Mission Assurance - Quality, Safety & Mission Assurance HQ & Core Management (MDA CIV)	Allot	MDA QS:AL, VA, MD, CA, AZ, HI, AK, MA, NJ, FL, AR, UT	12.879	9.395		12.000	Oct 2012	11.877	Oct 2013	-		11.877	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - Quality, Safety & Mission Assurance Operations Support	C/CPFF	MDA QS:AL, DC, VA	2.500	1.775		2.104	Oct 2012	1.898	Oct 2013	-		1.898	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance - Quality, Safety & Mission Assurance Operations Support (Travel/PCS)	Allot	MDA QS:AL, CO, AK, DC, VA	8.606	2.241		2.000	Oct 2012	1.753	Oct 2013	-		1.753	Continuing	Continuing	Continuing
Subtotal			23.985	13.411		16.104		15.528		0.000		15.528			

Remarks
N/A

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	65.009	28.528	34.388	30.140	0.000	30.140			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency							DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>			PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>			
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks
 Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD40: <i>Program-Wide Support</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
MD40: <i>Program-Wide Support</i>	-	51.532	16.384	18.321	-	18.321	17.887	19.313	21.957	22.013	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

N/A

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) contains non-headquarters management costs in support of Missile Defense Agency (MDA) functions and activities across the entire Ballistic Missile Defense System (BMDS). It Includes Government Civilians, Contract Support Service, and Federally Funded Research and Development Center (FFRDC) providing integrity and oversight of the BMDS as well as, supporting MDA in enabling the development and evaluation of technologies that will respond to the changing threat. In addition, includes Global Deployment personnel and support performing deployment site preparation and activation. Other costs included provide facility capabilities for MDA Executing Agent locations, such as physical and technical security, legal services, travel and agency training, office and equipment leases, utilities, data and unified communications support, supplies and maintenance, materiel and readiness and central property management of equipment, and similar operating expenses. Also includes legal settlements. In keeping with congressional intent, Program Wide Support is allocated on a pro-rata basis and therefore, fluctuates by year based on the total MDA budget.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2012	FY 2013	FY 2014
Title: Program Wide Support	51.532	16.384	18.321
Articles:	0	0	0
Description: N/A			
FY 2012 Accomplishments: See paragraph A: Mission Description and Budget Item Justification			
FY 2013 Plans: See paragraph A: Mission Description and Budget Item Justification			
FY 2014 Plans: See paragraph A: Mission Description and Budget Item Justification			
Accomplishments/Planned Programs Subtotals	51.532	16.384	18.321

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Missile Defense Agency		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD40: <i>Program-Wide Support</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Missile Defense Agency **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD40: <i>Program-Wide Support</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Wide Support - Agency Operations Management	C/CPAF	Various:Multi: AL, CA, CO, VA	0.000	4.154		0.257	Mar 2013	2.204	Mar 2014	-		2.204	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Civilian Salaries, Travel, Training	Allot	MDA:AK, AL, CA, CO, VA	0.000	32.378		0.000		0.000		-		0.000	32.378	64.756	0.000
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various:Multi: AL, CO, CA, VA	0.000	15.000		16.127	Oct 2012	16.117	Oct 2013	-		16.117	Continuing	Continuing	Continuing
Subtotal			0.000	51.532		16.384		18.321		0.000		18.321			

Remarks
N/A

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	51.532	16.384	18.321	0.000	18.321			

Remarks
N/A